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Upper Salt Creek Watershed
Cook, Lake, and DuPage Counties, Illinois

FINAL ENVIRONMENTAL STATEMENT

Kenneth E. Grant, Administrator
Soil Conservation Service

Sponsoring Local Organizations:

North Cook Soil and Water Conservation District
P.O. Box 555, Lake Zurich, Illinois 60047

The Metropolitan Sanitary District of Greater Chicago
100 East Erie Street, Chicago, Illinois 60611

Cook County Forest Preserve District
536 North Harlem Avenue, River Forest, Illinois 60305

Village of Elk Grove
Elk Grove, Illinois 60007

Village of Schaumburg
Schaumburg, Illinois 60172

City of Rolling Meadows
Rolling Meadows, Illinois 60008

Village of Palatine
Palatine, Illinois 60067

Palatine Park District
262 East Palatine Road, Palatine, Illinois 60067

Schaumburg Park District
Schaumburg, Illinois 60172

Salt Creek Rural Park District
530 South Williams, Palatine, Illinois 60067

Elk Grove Park District
499 Biesterfield Road, Elk Grove Village, Illinois 60007

State of Illinois
Springfield, Illinois 62706

May 1973

PREPARED BY

UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
Washington, D. C. 20250

USDA ENVIRONMENTAL STATEMENT

Upper Salt Creek Watershed Project
Cook, Lake, and DuPage Counties
Illinois

Prepared in Accordance with
Sec. 102(2)(C) of PL-91-190

Summary Sheet

I Draft

II Soil Conservation Service

III Administrative

IV Brief description of project purpose and action -- A watershed project to be installed in a 9-year period in Cook, Lake, and DuPage Counties, Illinois by 12 sponsoring local organizations with federal assistance under the provisions of PL-83-566. Project purposes are watershed protection, flood prevention, and recreation. The project will include land treatment measures supplemented by one floodwater retarding-recreation structure, 5 floodwater retarding structures, 1.8 miles of channel modification, and 261 acres of flood plain preserves. Total project installation cost is estimated at $26,515,800.

V Summary of environmental impact and adverse environmental effects. The land treatment program will reduce erosion on construction sites by 29 percent, provide for storage of 40 to 50 percent of the soil eroded from these areas, reduce water runoff, and promote more efficient land use according to its characteristics. The combined program of land treatment and structural measures will directly benefit 3,380 acres by reducing floodwater and sediment damages 88 percent. Flood related public health hazards will be reduced. The project will provide the basis for 1,610,000 annual visitor days of recreation and 300,000 annual visitor days of incidental recreation by creating 649 acres of permanent water surface which will also supply aquatic habitat. Approximately 261 acres of undeveloped flood plain will be preserved for low hazard-low intensity uses. Installation of the floodwater retarding structures will directly affect 1,708 acres. Vegetative cover on 208 acres of construction area will be disturbed; permanent flooding will convert 649 acres from terrestrial to aquatic habitat, and 851 acres will be temporarily flooded by detention pools. Channel modification will temporarily disturb the vegetative cover on 26 acres of right-

of-way. Approximately 700 persons and one business will be displaced as a result of the project. Vehicular traffic will increase in response to recreational development in the Ned Brown Preserve.

VI List of alternatives considered:

(a) Land treatment alone.
(b) Channel modification in reaches A through F without structures 2 through 6.
(c) Channel modification in reaches A through F without structures 1 through 6.
(d) Flood plain management.
(e) No project.

VII Agencies and other sources from which comments have been received:

U. S. Department of the Army
U. S. Department of Commerce
U. S. Department of Health, Education, and Welfare
U. S. Department of the Interior
U. S. Department of Transportation
Environmental Protection Agency
Federal Power Commission
Governor of Illinois
Office of Planning and Analysis
Northeastern Illinois Planning Commission
National Audubon Society
Mr. George J. Benda
Mr. Neal Bratschaw

VIII The final statement was transmitted to the Council on Environmental Quality on MAY 16 1973.

The draft statement was received by CEQ on December 4, 1972.

USDA SOIL CONSERVATION SERVICE ENVIRONMENTAL STATEMENT

Title of Statement: The Upper Salt Creek Watershed Project
Cook, Lake, and DuPage Counties, Illinois

Type of Statement: Final

Date: May 1973

Type of Action: Administrative

1. Description

Authority for Project: Federal assistance through PL-566, 83d Congress, 68 Stat. 666, as amended.

Sponsoring Local Organizations:

North Cook Soil and Water Conservation District
The Metropolitan Sanitary District of Greater Chicago
Cook County Forest Preserve District
Village of Elk Grove
Village of Schaumburg
City of Rolling Meadows
Village of Palatine
Palatine Park District
Schaumburg Park District
Salt Creek Rural Park District
Elk Grove Park District
State of Illinois

Purpose of Project: The purpose of the project is watershed protection, flood prevention, and water-based recreation.

Project Measures: The project plan provides for conservation land treatment measures, 5 floodwater retarding structures, one floodwater retarding-recreation structure, 1.8 miles of channel modification, and 261 acres of flood plain preserve.

Environmental Setting:

Upper Salt Creek Watershed is an area of 52 square miles or 33,280 acres located primarily in Cook County, Illinois with minor areas located in Lake and DuPage Counties (See Appendix F). The watershed lies 25 miles northwest of downtown Chicago. Salt Creek is tributary to the Des Plaines River which joins the Kankakee River 10 miles southwest of Joliet to form the Illinois River. The

watershed is located within Water Resource Subregion 0712, which is the drainage basin of the Illinois River above Starved Rock Lock. This subregion includes the Fox River Basin extending northward into Wisconsin and the Kankakee River Basin extending eastward into Indiana and Michigan.

The humid continental climate of the watershed is characterized by large extremes in temperature and precipitation. Abrupt changes in weather occur from 20 to 25 times per year with major frontal passages. Precipitation averages 32.7 inches annually. The monthly distribution of precipitation is fairly even with a low monthly mean of 1.87 inches in February, a high monthly mean of 3.62 inches in May, and an average of 2.73 inches per month. Approximately 19.5 inches (60%) occurs during the growing season from April 1 - September 30. Average annual snowfall is approximately 33 inches, unmelted. The mean annual temperature is 42.3 degrees F. The range is from a mean of 17.6 degrees F for January to a mean of 65.6 degrees F for July.

Average annual runoff is 11 inches. The greatest amounts occur during the spring months with high mean in April of 20 percent. The smallest amounts of runoff occur during summer and fall, with a low monthly mean of 3 percent in November. The monthly distribution of runoff is shown in the following table:

Jan	- 5 percent	July	- 8 percent
Feb	- 16 percent	Aug	- 4 percent
Mar	- 10 percent	Sep	- 6 percent
Apr	- 20 percent	Oct	- 4 percent
May	- 6 percent	Nov	- 3 percent
June	- 14 percent	Dec	- 4 percent

Proximity to the expanding Chicago Metropolitan area and O'Hare International Airport has caused the area's population to grow rapidly. Estimates of past, present, and future population, as supplied by the Northeastern Illinois Planning Commission, are listed below:

Year	Population
1965	72,200
1970	93,500
1975	121,000
1985	178,300
1995	224,500

Major changes in land use have accompanied the rapid population growth. Land use estimates for September (1969) and future (1990) conditions are shown below:

	LAND USE			
	1969		1990	
	Acres	Percent	Acres	Percent
Developed				
Residential	10,150	30.5	18,890	56.8
Business, Industrial, and apartment developments	2,710	8.2	5,040	15.1
Forest land (Cook Co., Forest Preserve)	2,860	8.6	2,860	8.6
Recreation areas	930	2.8	1,740	5.2
Roads, railroads	1,210	3.6	2,250	6.8
Miscellaneous	370	1.1	690	2.0
Subtotal	18,230	54.8	31,470	94.5
Undeveloped				
Cropland	12,200	36.6	620	1.9
Forest land (Private)	920	2.8	520	1.6
Wetlands	1,930	5.8	670	2.0
Subtotal	15,050	45.2	1,810	5.5
TOTAL	33,280	100.0	33,280	100.0

Developed land defined as that which has been committed to a permanent use occupies 54.8 percent of the watershed. About 31 percent is used for single family dwellings. An estimated 80 to 90 percent of these dwellings are located within incorporated areas having an average density of 3 homes per acre. Business, industrial, and apartment complexes account for 8.2 percent of the watershed. Recreational areas including golf courses, parks and playgrounds occupy 2.8 percent of the area. Also available for recreation are 3 preserves of the Cook County Forest Preserve District which total 8.6 percent of the watershed. Land zoned for business or industrial uses is valued at approximately $55,000 per acre.

Undeveloped land, defined as that which is privately owned and uncommitted to a permanent use, occupies 45.2 percent of the watershed. Cropland, which is the principal undeveloped land use type accounts for 36.6 percent of the watershed area. The major crops produced are corn and soy-

beans. Minor crops include fruit, vegetables, and nursery stock. Riding horses are the principal livestock. Private woodland accounts for 2.8 percent of the watershed and wetlands account for 5.8 percent. Undeveloped land is valued at $5,000 per acre.

Future land use trends are illustrated in the table on page 3. By 1990, about 95 percent of the watershed will be developed, an increase of 40 percent. This urban growth will occur largely at the expense of cropland, which will decline 35 percent, to only 2 percent of the watershed area. The remaining 5 percent increase will result from conversion of woodland and wetland.

Approximately 11 percent or 3,780 acres of the watershed is in woodland cover consisting primarily of central mixed hardwoods of high esthetic value. Little or no timber is being harvested at this time. The Cook County Forest Preserve District owns approximately 2,860 acres of this forest land and manages it for recreational and educational use. The remaining 920 acres of forest land is privately owned. It is anticipated that during the next 20 years, approximately 400 acres of privately owned woodland will be converted to urban land.

The Busse Forest Nature Preserve, one of a series in the Illinois Nature Preserve System, lies within the boundaries of the Ned Brown Forest Preserve. It is located adjacent to the extreme northeast end of the proposed structure 1 reservoir. (See Appendix C) The Preserve contains approximately 300 acres of woodland and marshland and 155 acres of grassland which were formerly cultivated. The woodland includes oaks, sugar maple, and basswood on upland sites and swamp white oak and ash on the flats. Marshes and swamps occur in the poorly drained areas. A special feature is an abundance of shrubs and wild flowers including large numbers of large flowered trillium. The Preserve is maintained as an area of scientific, educational, and esthetic interest.

Wildlife habitat is limited to the undeveloped land and the Forest and Nature Preserve areas. Interspersed wetlands, cropland, and brushy areas support populations of pheasants, rabbits, furbearers, and songbirds. Remaining wetlands are used by migratory waterfowl. The wildlife habitat, with the exception of the Forest and Nature Preserves, is rapidly being destroyed by urbanization. The watershed is not known to contain populations of endangered or unique fauna or flora. Fish populations are limited by lack of suitable habitat.

The watershed is not recognized as an important historical or archeological area. The watershed contains no archeological or historical sites listed in the National Register of Historic Places. However, one locally recognized archeological site is located in the Ned Brown Preserve.

Salt Creek Watershed is located within the Northeastern Illinois metropolitan area which has a highly diversified industrial and commercial economy. Major fields of manufacture include food and kindred products, printing and publishing, machinery, and both primary and fabricated metal products. Both manufacturing and service industries provide a relatively stable employment base for the 3,389,000 work force of the Chicago SMSA. During the period 1965 through 1969 the rate of unemployment averaged 2.7 percent. During 1970 the unemployment rate was 3.5 percent compared to the statewide average of 5.4 percent.

Percentage of households by cash income groups for Illinois and Cook, DuPage, and Lake Counties are shown in the following table:

Percentage Households
Income Groups

	$ 0 / 2,999	$3,000 / 4,999	$5,000 / 7,999	$8,000 / 9,999	$10,000 And Over
Illinois Total	13.3%	8.8%	17.8%	15.5%	44.6%
Cook County	11.0	7.7	16.6	15.0	49.7
DuPage County	5.6	3.9	9.9	13.5	67.1
Lake County	7.4	6.0	14.5	15.4	56.6

The watershed counties have generally lower percentages in the less than $10,000 income group and higher percentages in the greater than $10,000 income group.

Water and Related Land Resource Problems:

Upper Salt Creek Watershed is affected by several water-related problems. Upland areas are subject to erosion and locally poor drainage. The flood plain areas are subject to frequent flooding

and local sedimentation problems. Facilities for water-based recreation in the area are inadequate. Salt Creek and its tributaries are seriously polluted by organic wastes.

Flooding is the most severe water-related problem in the area. The 1,940-acre flood plain in Upper Salt Creek Watershed is subject to frequent inundation causing extensive damages to 1,200 residences, personal property, 3 schools, and 2 businesses. Flooding also closes streets, and interrupts traffic on major highways. Estimated average annual floodwater damages are $412,600.

The flood of June 1967, gauged by the U. S. Geological Survey at the Golf Road bridge over Salt Creek, caused an estimated $926,000 damage. This event has an estimated recurrence frequency of 10 years. Civil Defense estimated that the storm of August 1972 to which the USGS has assigned a 25-year recurrence frequency, caused $8 million damage in the entire Salt Creek Watershed, including the 1,440-acre Lower Salt Creek flood plain in DuPage County. Flooding of several sewage treatment plants in the downstream DuPage County Salt Creek flood plain resulted in aquifer contamination as flood borne untreated sewage entered abandoned and currently used wells. This event also flooded a 170-unit trailer court located in the proposed structure 1 pool area to depths of 6 to 7 feet requiring evacuation of the 700 residents. Future development will worsen the problem. Projected future average annual damages are estimated at $853,500.

There are three types of flooding which damage the 1200 existing residences in the 100-year flood plain. The first is basement and lower level flooding caused by storm sewer backup. Approximately 65 percent of the residences experience this type of flooding. Although the depth is usually shallow the water is polluted and highly damaging. Appliances, furnishings, interiors, and personal property are commonly water damaged. Cleanup expenses are extremely high for this type of flooding.

The second type of flooding is direct entrance of surface water into lower level garages, basements, and subground surface living areas. Approximately 30 percent of the residences experience this type of flooding. The floodwater usually rises very rapidly and reaches depths of from 3 to 5 feet. Damages from this type of flooding are usually similar to those caused by sewer backup. However, the damages are usually more severe due to the increased depth of inundation and the rapid rise of floodwater. In addition, structural

damage to such items as basement windows, wiring, walls, and heating plants also occurs.

The third and least frequent type of flooding is inundation of the frame portions of structures. An estimated 5 percent of the flood plain homes are affected by this type of flooding. Damaged items include major structural components, such as floors, floor joists, walls and insulation. Carpeting, furniture, and other high value personal property normally found in the main living area are also damaged.

The frequency of flooding in Upper Salt Creek Watershed is increasing. This increase is attributed to a combination of several factors. (1) During urban development depressions acting as natural floodwater detention areas are storm sewered into the main channels. (2) As impermeable features such as rooftops and pavements replace infiltration areas such as cropland, pasture and woodland, the rate and volume of runoff increases. (3) Obstructions such as road embankments and land fills across natural floodways obstruct flows and increase floodwater elevations. (4) Uncoordinated channel improvement in several areas has accelerated flows and increased flooding in downstream area. (5) Sedimentation of channels has increased flood stages.

Floodwater damage is aggravated by sedimentation resulting from serious erosion. Erosion from farmland is decreasing with dwindling farm acreage; however, construction activities cause estimated annual soil losses of 70 tons per acre during construction operations. Annual soil losses are expected to be most serious during the next twenty years, or until full development has taken place.

Despite the fact that Lake Michigan is located only 12 miles from the watershed, there is a critical shortage of facilities for water-based and other outdoor recreation for the 6,000,000 people who reside within a 25-mile radius of the watershed. Lake Michigan has limited access and does not provide the types of recreation associated with small lakes. There are only 20 acres of public fishing waters within the watershed. Salt Creek and its tributaries support only non-game species of fish due to periods of low flow and pollution. While huntable populations of upland and migratory game species occur in some parts of the watershed, hunting opportunities are restricted by urban encroachment and private land ownership.

Water quality in Salt Creek is adversely affected by discharges from sewage treatment plants, overflows from combined sanitary and storm sewers in Palatine, sediment carried in suspension and

discharges from malfunctioning private septic fields located mainly in unincorporated areas outside of village limits. The total number of these systems is not known. The major developed unsewered area is the Village of Inverness, an area of high value homes with lot sizes of 1 to 2 acres. Septic filter fields usually function satisfactorily on lots of this size except during abnormally wet periods. The Cook County Health Department has reported that complaints in this area are relatively infrequent.

The total pollution load in Salt Creek degrades the quality of life along the streams and creates local health hazards. Water quality data for Salt Creek Illinois EPA station GL-06 is summarized below. The data from this station, located 1.4 miles downstream from the Ned Brown Preserve, is the only available systematic data for current conditions.

WATER QUALITY DATA
Illinois EPA Sampling Station GL-06

Year	Sample Date	Temp Degree F	Field D.O. mg/l 1/	PH	Total phos. as P mg/l	COD mg/l 2/	Fec. Coli 3/ No. 100 ml	Ammonia Nitrogen mg/l
1972	8/14	65	7.5	7.6	0.080	--	2000	0.05
	6/27	70	7.5	7.7	0.120	--	1000	0.20
	4/20	50	10.5	7.9	0.440	--	--	0.04
Mean			8.5		0.213		1413 4/	0.09
1971	12/16	36	9.0	7.8	0.065	29	3900	0.20
	11/2	54	3.0	7.7	0.131	55	4400	0.40
	7/14	78	4.5	7.8	0.065	34	20,000	--
	6/24	71	1.8	7.6	0.093	33	5000	--
	3/10	32	10.4	7.8	0.033	35	1200	1.20
Mean			5.7		0.077		3565 4/	0.60
2 Yr Mean					0.128			0.34

1/ Dissolved Oxygen
2/ Chemical Oxygen Demand
3/ Fecal Coliform Organisms
4/ Geometric Mean

It is not possible to directly compare the preceding data with the State General Standards for dissolved oxygen and fecal coliform due to the manner in which these standards are defined. However, comparisons can be made for phosphorus, pH, and ammonia nitrogen. The two year mean for phosphorus of 0.128 mg/l exceeds the State standard of 0.05 mg/l by 0.078 mg/l. At downstream locations such as at Fullersburg Park where serious algal blooms have occurred, the 2-year average is 2.399 which far exceeds the State standard. The GL-06 values for ammonia nitrogen and pH fall well within State standard acceptable respective values of 1.5 mg/l and 6.5-9.0.

The watershed lies within the Upper Salt Creek and Upper Des Plaines service areas of the Metropolitan Sanitary District. The MSD is carrying out a program to improve water quality in the watershed. This program is described in the MSD "Ten Year Clean-up and Flood Control Program" and in the NIPC "Regional Wastewater Plan". The major element of the program is the Salt Creek Water Reclamation Plant now under construction on Meacham Road north of Nerge Road. This plant, scheduled to become operational in late 1974, will serve all or parts of Palatine, Schaumburg, Elk Grove, Hoffman Estates, Roselle and Barrington Woods. The plant will service an area of approximately 54 square miles and be designed for an average daily flow in 1985 of 50 million gallons. Tertiary treatment will be provided and the effluent will be discharged downstream from the Ned Brown Preserve. Operation of this plant will not significantly affect discharges in the West Branch of Salt Creek.

Planned Project:

Project measures include adequate land treatment on about 9,140 acres to be installed during the 9-year installation period. Structural measures (See Appendix F) consist of one recreational development (multiple-purpose reservoir with recreation facilities), five floodwater retarding structures, approximately 1.8 miles of channel modification, and 261 acres of flood plain preserve. Total project installation cost is estimated at $26,515,800.

Land treatment measures, based on using each acre within its capabilities and treating it in accordance with its needs, will be installed. Emphasis will be placed on accelerating establishment of practices which significantly reduce erosion and floodwater damages. An estimated 22 conservation and resource plans will be prepared during the project installation period. The area to be affected by these plans includes 17,000 acres within village limits; 4,000 acres controlled by other local governmental units, such as

the Cook County Forest Preserve District and five park districts, and 1,000 acres of agricultural land. Land treatment in the developing urban areas will be accomplished by working with the seven major governmental bodies who have authority over land use in the watershed. These bodies are or will become cooperators with the North Cook Soil and Water Conservation District and will enact sediment and erosion control ordinances. A model ordinance for the northeastern Illinois area has been developed and will serve as a guide for the development of individual ordinances. Emphasis will be placed on improvement of proper land use and treatment of land needs in two major areas: (1) upland areas -- where erosion is caused by new developments, pollution is caused by poorly located septic filter fields, and localized flooding occurs as a result of the lack of provision for disposal of floodwater; (2) flood plain areas -- where flood damages are increasing because of continued development.

The land treatment program includes diverse types of measures. Cropland subject to erosion will be protected by the use of minimum tillage, grassed waterways, and conservation cropping systems. Forest management plans on private land if implemented will provide for fire protection, thinning, cultural and sanitation work, tree planting and interplanting, harvest cutting and wildlife needs. In addition, the Illinois Department of Conservation, Division of Forestry, when requested, will provide assistance in forest land planning and zoning to planning commissions, sanitary sewer districts, highway commissioners, leaders of local communities, land developers and private landowners.

Erosion and sediment control practices which will be used by developers on upland areas will include debris basins, waterways, diversions, critical area seeding, and floodwater retention structures. Steps will be taken during construction of the project to control erosion and sediment. Poorly drained areas in existing and proposed urban development areas will be improved through the use of drainage mains and laterals, drainage field ditches, and drains where needed.

The land treatment program in the evaluated flood plain areas will be accomplished by (1) providing guidance through planning for suitable land use; (2) providing guidance to villages in carrying out flood plain ordinances; (3) distributing material describing sound floodproofing measures; (4) informing individuals who are within the with-project flood plain of the potential flood hazard; and (5) proposing suitable floodproofing measures which these individuals can install to reduce or eliminate the damage potential. It is estimated that of the 240 homes within the with-project flood plain, 50 of them will

install floodproofing measures during the 9-year installation period.

Wildlife wetland habitat development will be applied to enhance the wildlife resources. Such development will consist essentially of establishing, maintaining, and preserving shallow wetland areas suitable for protection and propagation of waterfowl and furbearers. Practices beneficial to wildlife such as protected grass seedings and field or area borders will be included in conservation plans for areas devoted to nature study and birdwatching.

Multiple-purpose structure 1 and structures 2 and 3 are planned as compacted earth fill dams with reinforced concrete principal spillways and vegetated emergency spillways (See Appendix A). Structures 4, 5, and 6 will be excavated storage pump discharge floodwater retarding structures with diversion inlets (See Appendix B). These structures are designed with features such as unusually flat side slopes, berms, and subsurface drainage to insure structural integrity in areas of complex geologic conditions. Excavated material will be disposed of on-site by placing it to form a pleasing addition to the landscape. The 6 structures will have a total combined storage capacity of 9,554 acre-feet. Total floodwater detention capacity will be 6,467 acre-feet. The sediment storage volume of 568 acre-feet will be adequate for an estimated 100-year accumulation. Recreation storage, as provided in structure 1 will be 2,519 acre-feet.

Structures 4, 5, and 6 are unusual in that flood storage capacity will be provided by excavation below the existing flood plain elevation. Structure 4 will be operated by bypassing low flows and diverting flood flows into the storage area via a reinforced concrete chute spillway. This spillway will operate during flood events equalled or exceeded on a 5-year frequency. Flow in the bypass channel will be limited by an orifice. No emergency spillway is necessary since the flood storage is below grade. After storm flows have subsided in the downstream channel areas, evacuation pumps will drain the storage area in a maximum of 6.5 days. Structures 5 and 6 will operate in a similar manner with the exception of a 2-year frequency chute spillway operation for structure 6.

Multiple-purpose structure 1 will have a permanent pool area of 589 acres divided into one main pool at elevation 686 and two lateral pools at elevation 688 (See Appendix C). In order to obtain the desired volume and depth of water needed for development of recreation, approximately 1,469 acre-feet of recreation storage will be provided by dredging. The two lateral impoundments are elevated

two feet above the main pool in order to reduce the total quantity of dredging required to provide the desired quality and volume of recreation water. These two pools will also be sources of relatively pollution-free water to protect the structure 1 fish population from a potential total kill resulting from pollution in the main stem of Upper Salt Creek. The Metropolitan Sanitary District program to treat all sanitary effluent in the watershed and discharge downstream from structure 1 will serve to improve the recreation water quality and maintain the recreation potential.

The plan provides for disposal of 1,540 acre-feet of dredged material including 71 acre-feet incidentally dredged for flood storage. Approximately 1,200 acre-feet of dredged material will be used to build a winter sports hill west of Bisner Road at the southwest corner of the recreation development. (See Appendix C). The north spoil area for approximately 340 acre-feet will be located between Golf and Algonquin Roads in the flood plain adjacent to Salt Creek. Placement of spoil at this location will elevate the area above the 100-year flood elevation.

Approximately 2,200 acres will be provided for recreation facilities. The water-based facilities will include asphalt-paved parking areas and access drives, picnic shelters, comfort stations, boat launching ramps, trails, nature trails, fishing walls, picnic tables, and boat docks. Special features of the comfort stations include flush-type toilets, electric lights, ventilation, and running water for the lavatories. The reservoir will be stocked with suitable game fish and areas for undisturbed fishing will be developed through a reservoir zoning plan.

The non-water based facilities to be installed include a winter sports complex with warming shelter, toboggan slides and ski and sled areas, and an elk pasture. To service these facilities, paved parking areas and an additional comfort station will be provided. The existing parking areas and picnic grounds will be utilized and incorporated into the total development.

All recreation facilities at structure 1, including associated facilities for disposal of sanitary and solid wastes, will be constructed, operated, and maintained in accordance with U. S. Public Health Service Publication No. 1195, "Environmental Health and Practice in Recreational Areas". Sanitary wastes will be treated in a municipal plant and solid wastes will be disposed of in off-site approved commercial or municipal land fills.

Effective operation and timely maintenance are important aspects of the project. The Sponsoring Local Organizations fully understand their obligations for maintenance as described in the Operation and Maintenance section of the work plan, and will execute specific maintenance

agreements prior to the issuance of invitations to bid on construction of structural measures. Representatives of the Sponsoring Local Organizations will, after each heavy rain, or at least annually, make maintenance inspections of all works of improvement, flood plain preserves, and channel systems. A representative of the Soil Conservation Service will participate in these inspections at least annually for the first three years following installation.

A trailer court containing about 170 owner-occupied mobile homes and homesite rental units will be acquired as part of the land rights for structure 1. This will require the displacement of a grocery business operated jointly with the trailer court and 700 residents of the court, including three families occupying rental apartments over the grocery business. All displaced persons and businesses are entitled to receive relocation assistance under the provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.

Structures 2, 3, 4, 5, and 6 will have a combined sediment pool area of 60 acres. Surrounding land in public ownership which will be available for public recreation, totals 153 acres. It is the responsibility of the local sponsors of recreation pools to insure that water quality standards for recreation are met and that the associated recreational developments have sanitary facilities which meet State and local health regulations. These developments will be constructed, operated, and maintained in accordance with Illinois Rules and Regulations for Recreational Areas as described in Illinois Department of Public Health Circular 4.104. All hydraulic facilities such as spillways and pumps will be fenced for visitor safety. Specific plans for recreational facilities have not been developed; however, it is anticipated that in addition to basic sanitary and access facilities, facilities for picnicking, boating, hiking, and winter sports will be provided. The sediment pools of the proposed structures will initially have sufficient depth to support fish life. At structures 2 and 3 the sediment pools will be deepened by the local sponsors in order to improve the suitability of these pools for recreational use. Spoil will be disposed of on-site and revegetated. At present, water quality at the proposed sites is marginal for desirable fish species; this condition will improve as planned sewage treatment facilities are installed and water quality standards are met.

The proposed 1.8 miles of channel modification will require 94,000 cubic yards of earth excavation. The modified channel will be earth lined and trapezoidal in section with a 26 to 30 foot bottom width and side slopes varying between 1.5 and 3 horizontal to 1 vertical. Riprap erosion protection will be installed in the downstream 0.75 mile and around bridge openings. Spoil will be spread in areas adjacent to the channel and maintenance berm. Ditchbanks, berms, and inside of spoil areas will be revegetated to a grass-legume mixture. Suitable shrubs or trees will be established along the outside berm edges or on spoil areas. Reintroduction of excavated

material will be prevented by timely establishment of vegetation and regulation of lateral inflow by control structures.

Undeveloped flood plain areas identified in reaches B, G, and H on the project map (See Appendix F) are identified as areas with great future damage potential and important hydraulic characteristics which affect both upstream and downstream flood crests. Portions of these flood plains will be used only for low intensity-low hazard uses, such as natural areas, parks, playgrounds, open space, and parking lots. These designated low intensity-low hazard use areas (floodways) are identified on the project map as flood plain preserves. The sponsors will insure that the 100-year frequency with-project flood profile as identified in the work plan will not be altered. This will be accomplished by written agreement with the landowners.

All disturbed areas will be treated to control erosion during construction of the planned project. Measures will include shaping of borrow and spoil areas, seeding to establish permanent vegetation, and interim seeding and/or mulching prior to winter shutdown periods. Contractors will be required to adhere to State of Illinois statutes relating to air, soil, and water pollution. All wells associated with project construction will be properly sealed to prevent pollution of aquifers. Maintenance programs planned and carried out by the local sponsoring organizations will insure adequate control throughout the life of the project.

Special provisions have been included in the plan in order to minimize adverse effects on the Busse Forest Nature Preserve which may be caused by installation of structure 1. The following measures will be applied to provide maximum protection for the preserve:

(1) No clearing of trees will be done within the Nature Preserve with the exception of trees located on the present stream bank.

(2) Preceding installation of structure 1, the Cook County Forest Preserve District will install approximately 1,500 feet of low earth levees to prevent floodwater from entering the north end and southwest corner of the Preserve. This will involve construction of about 900 feet of levee, one foot in height; 300 feet of levee, two feet in height; and 300 feet of levee, three feet in height. Three flood-gated culverts, 16 feet in length and one foot in diameter, will be installed through the levees.

(3) The Illinois Nature Preserves commission and the Cook County Forest Preserve District will jointly monitor the effects of structure 1 after it is installed to determine if flooding, erosion, or sedimentation are affecting the natural woodland.

(4) In the event that the installation of structure 1 causes any impairment or disturbance of the natural woodland by erosion, flooding, or sedimentation, the Forest Preserve District will install necessary control measures to reduce the adverse effects. These measures could include sediment traps, channel bank stabilization, and additional low earth levees.

The State Liaison Officer for Historic Preservation has indicated that there are no historic sites in the watershed which currently are being considered for nomination to the National Register of Historic Places. (See Appendix E). The locations of the proposed structural measures were reviewed by the Illinois Archeological Survey. Installation of the structural measures will not directly affect any known archeological materials or historic sites. However, there is a known archeological site in the flood pool and recreation development area at structure 1. A trail is planned for the area in question. This area, as well as the pool and construction areas, will be field reviewed by the Survey prior to construction. The Soil Conservation Service will keep the Director, Northeast Region, National Park Service and the Illinois Archeological Survey informed of progress in the project in conformance with the Federal Reservoir Salvage Act (PL-86-523). The Survey will be contacted for examination and possible salvage in the event that archeological materials are uncovered during construction.

2. Environmental Impact

The program of land treatment and structural measures in Upper Salt Creek Watershed will directly affect 3,380 acres, including 1,940 acres in Upper Salt Creek and 1,440 acres in Lower Salt Creek. Floodwater and sediment damages will be reduced 88 percent directly affecting about 1,200 existing residences, 3 schools, 2 businesses, and 24 road crossings within Upper Salt Creek Watershed. Public health will be affected as flood protection allows sewagettreatment plants to function more effectively. Aquifer contamination such as occurred in August 1972 will be reduced. Project installation

will also result in a 100-year average annual savings of $127,800 in planned State of Illinois channel modification in Lower Salt Creek Watershed.

The planned vegetative type land treatment measures will reduce erosion from construction areas by about 29 percent. Debris basins and retention-type structures will store approximately 40 to 50 percent of the soil eroded from these areas. On-site effects including reduced maintenance costs resulting from sediment removal will accrue to over 12,000 property owners. Off-site effects will include reduced sedimentation in the floodwater retarding structures, the multiple-purpose structure, and other water bodies. The land treatment program including the supplying of information to flood plain land owners will increase public awareness of flood hazards and has the potential for significantly reducing the remaining with-project damages. Habitat development included in the land treatment program will enhance both upland and wetland wildlife resources.

The dedication to low intensity-low hazard public use of 261 acres of flood plain preserve in reaches B, G, and H with the provision that the hydraulic characteristics of these areas not be altered will maintain the present flood storage characteristics of these areas. Future damages will be prevented and the preserve areas will be available for public recreational use.

The combined 589-acre permanent pool and recreation facilities at multiple-purpose structure 1 will provide an additional 1,610,000 annual visitor days of water-based recreation activities in the Ned Brown Forest Preserve. At structures 2, 3, 4, 5, and 6 the 60 acres of sediment pools and 153 acres of surrounding public land will provide the basis for an additional 300,000 average annual visitor days of potential incidental recreation. The recreational potential of the sediment pools will gradually decline as they fill with sediment.

The recreation development proposed for the Ned Brown Preserve will change the effect of the facility from traffic sheltering to a major traffic generator. This will increase vehicular traffic in the vicinity of the Preserve and directly affect thoroughfare use in the surrounding communities. Average daily traffic counts (1969) for Elk Grove Village are listed below:

Rohlwing Road (IL-53)	14,200
Arlington Heights Rd.	13,700
Higgins Road	10,100
Devon Ave.	5,700
Landmeier	5,700
Oakton	2,900

The "Recommended Thoroughfare Plan" for Elk Grove (1971) reported the total future trips (1990 estimates) to be 282,000 daily including 162,000 work trips per day. A report prepared for the Village of Elk Grove by Dr. Edwin Thomas, Center for Urban Studies at the University of Illinois Chicago Circle Campus estimated half the weekly recreation traffic in the summer would occur on weekends with combined weekend recreation trips of 57,500 vehicles. The 1,500 Ned Brown parking spaces within the vicinity of St. Alexius Hospital are expected to generate weekend peak traffic flows of 2,000 to 2,500 vehicles per hour. Internal traffic circulation within the Preserve is minimized; thus more traffic can be expected on weekends to be searching for parking spaces and access which will be provided from Higgins, Arlington Heights, and Biesterfield Roads. Traffic congestion and accidents will increase along these roads and Cosman and Bisner Roads due to drivers searching for parking spaces and using the shoulders for informal parking. The local traffic to Woodfield Mall (Golf Road and I-90) will coincide with peak weekend traffic to the Ned Brown Preserve. In describing the impact of the development, the Thomas Report states that "Neither total vehicular trips nor peak flows are large, in general, when compared with the 1990 estimates (for the village)....combined weekend trips to the Preserve are equal to only approximately one-third of this (daily work trips) amount."

Project installation will produce redevelopment and secondary economic benefits. An estimated 600 man years of employment will be created for both skilled and unskilled labor during project associated construction activities. A multiplier effect from these wage expenditures will be felt throughout the local economy. The operation and maintenance of project measures will create an average annual 50 man years of employment and generate sales for associated industries. Demand for recreational services, supplies and equipment will increase as a result of the recreational opportunities created by the project. This added demand for labor and services will serve to reduce the rate of unemployment.

Approximately 1,708 acres will be required for the sediment, beneficial use and retarding pools and construction areas for the floodwater retarding structures. Current land use in the proposed construction and pool areas is shown in the table on page 18.

	LAND USE ACRES							
	Grass-land	Crop-land	Idle-land	Forest-land	Swamp-land	Miscel-laneous	Reforest-ed land	Totals
Construction Area	104	9	36	57	2	-	-	208
Combined Sediment & Beneficial Use Pools	504	23	6	56	10	15	35	649
Retarding Pools	524	47	42	109	6	34	89	851
TOTALS	1,132	79	84	222	18	49	124	1,708

The combined sediment and beneficial use pools will permanently flood 649 acres, thus converting this area from terrestrial to aquatic habitat. The retarding pools will temporarily inundate 851 acres which are predominantly grassland (62 percent), forestland (13 percent), and immature reforested land (10 percent). The maximum inundation period is 10 days. Vegetative cover and wildlife habitat on 208 acres required for dams, emergency spillways, borrow areas, and general construction areas will be destroyed or temporarily disturbed. Revegetation to grass and shrubs will restore these areas to habitat conditions similar to those existing prior to construction.

Spoil disposal areas will appear unsightly during the construction process. Vegetation of these areas will lessen their overall visual impact and prevent excessive erosion. At structures 1, 4, 5, and 6 the topography produced by the spoils will add diversity to the landscape and provide slopes for recreation.

The major changes in woodland habitat produced by the project will occur at structure 1 where permanent flooding will convert 91 acres to an aquatic environment. Thirty-five acres of this habitat consist of juvenile trees established during a reforestation program accomplished in the 1960's. The planting mixtures consist of 48 percent Green Ash, 15 percent Silver Maple, 6 percent Black Cherry, and 6 percent White

Oak with lesser percentages of Tulip Tree, Linden, Cottonwoods, Bald Cypress, Honey Locust, Red Oak, Burr Oak, and Sycamore. The remaining 56 acres of woodland habitat consists of natural woodland located along the banks of Salt Creek. The major creekside species are Black Willow and Box Elder with lesser numbers of Elm and Cottonwood. The terrestrial biota occupying the 91 acres will be replaced by aquatic biota. A salvage program to be carried out by the Forest Preserve District will move the better tree specimens out of the affected reforestation areas into selected undisturbed locations. The District was instrumental in determining the permanent pool elevation which would minimize damage to woodland.

In addition to the 1,400 acres utilized at structure 1 for pools and construction, the remaining 2,200 acres of the 3,600 acre Ned Brown Forest Preserve will be included in the overall public recreation development. (See Appendix C) Included in this area are 268 acres of reforested land covered by immature trees and 826 acres of mature woodland. These lands will remain unchanged by the recreation development with the exception of construction of 11.5 miles of trails which will in part pass through these woodlands. The existing 15 acres of drives and parking areas will be expanded to 60 acres by converting 45 acres of grassland. Also included in the recreation development plan are 155 acres of proposed reforestation of grassland. The remaining 891 acres of grassland, now partially developed for recreational use, will remain largely covered by grass. However, the intensity of use will increase with the development of facilities including trails, the winter sports hill, model airplane flying field, and picnic areas.

The planned 1.8 miles of channel modification will require 26 acres for right-of-way. This area is predominantly grass covered land adjacent to existing residential and commercial developments. Small trees and brush are present along the existing channel. Modification of this channel will require clearing of trees and brush to facilitate reshaping, excavation, and spoil disposal. This will result in temporary increases in bank erosion and loss of cover. Because of the encroachment of urban development, it will be difficult to retain existing woody cover on the channel banks. The planned revegetation to grass-legume mixtures, shrubs and trees will make the channel banks and spoil areas more esthetically appealing and stabilize erodible areas to prevent erosion and entrainment of sediment.

The Busse Forest Nature Preserve will be affected by multiple-purpose structure 1. Photogrammetric topographic maps with two-foot contour interval indicate that the recreation pool will permanently inundate approximately 31 acres of grassland in the Preserve. No woodland will

be permanently inundated. The 100-year frequency flood would inundate 50 acres of wet woodland and 75 acres of grassland to a maximum depth of five feet. The duration will be approximately 22 hours. The Nature Preserves Commission Staff indicated that flooding of the grassland is not inconsistent with the purpose of the Nature Preserve but that the woodland might be damaged. The planned special protective measures will minimize damage to the woodland. The esthetic impact of the protective levees will be minimal since they are relatively small with a maximum height of three feet and they will not be readily seen.

Project impacts upon mineral resources will be minimal. Structures 2 through 6 are located in areas where there are no known or suspected recoverable mineral deposits. Approximately 360 acres in the structure 1 pool area are underlain by thin (1 to 10 feet) discontinuous sheet-like deposits of sand and gravel. The volume of this material is estimated at 2 million cubic yards. These deposits are at present and into the foreseeable future uneconomic to recover due to several factors including high water table, thickness of overburden, discontinuity and poor quality. The overburden consists of clay and silt mixture with high amounts of organic material which renders it undesirable for most construction uses.

Flood protection in the downstream areas of DuPage County will facilitate extraction of sand and gravel in the flood plain areas. The flood plain preserves in reaches B, G, and H will limit development and possibly facilitate sand and gravel extraction in these areas, depending on local zoning ordinances.

Installation of the floodwater retarding structures will affect groundwater in adjacent areas. The sediment and recreation pools of structures 1, 2, and 3 will raise the groundwater level in nearby areas. The water surface of each structure will define a new higher elevation discharge point resulting in changed groundwater gradients. Significant impacts upon drainage facilities or structure foundations are not anticipated. Structures 4, 5, and 6 will result in a cone of depression with the water surface elevation defining the discharge point. During operation of the flood pools, recharge will occur. Shallow aquifers in the area around structures 4, 5, and 6 are not suitable for water supply and significant impacts are not anticipated.

The displacement of about 700 persons and a grocery business from a 170-unit trailer court located in the structure 1 pool area will have social and economic effects. Depending upon the locations of the new residences found for these people the costs and convenience of commuting to areas of work, shopping, schools, and recreation will

change. The families will experience disruptions in their normal daily activities during the actual moving process and they will have to adjust to different surroundings at their new places of residence.

Under the provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, the adverse impacts resulting from required relocations will be minimized to the maximum extent practicable. Relocation of the residents will relieve them of future flood damages, as occurred in the August 1972 event.

Average annual costs, benefits, and the ratio of benefits to costs are summarized in Appendix D.

3. Favorable Environmental Effects

(1) Erosion resulting from construction activity by developers will be reduced about 29 percent as a result of vegetative type land treatment measures.

(2) Debris basins installed under the land treatment program will store 40 to 50 percent of the sediment produced from construction areas.

(3) Levels of turbidity will be decreased.

(4) Floodwater damages will be reduced by an estimated 88 percent. Flood related public health hazards will be reduced.

(5) An estimated 1,610,000 visitor days of water-based recreation will be provided at structure 1.

(6) Floodwater retarding structures 2 through 6 will provide the basis for an additional 300,000 average annual visitor days of incidental recreation benefits.

(7) The project will create 649 acres of water surface suitable for lake fishery and waterfowl resting and feeding area.

(8) Two hundred sixty-one acres of undeveloped flood plain land will be dedicated to low intensity uses consistent with periodic flooding.

(9) Project installation will provide an estimated 600 man years of employment and operation and maintenance will provide an average annual 50 man years of employment.

4. Adverse Environmental Effects Which Cannot Be Avoided

(1) Installation of the floodwater retarding structures will disturb or destroy the vegetative cover on 208 acres.

(2) Channel improvement will disturb vegetative cover on 26 acres along 1.8 miles of stream channel.

(3) Combined sediment and beneficial use pools, permanently inundating 649 acres, will convert this area from terrestrial to aquatic habitat.

(4) The recreational potential of the planned reservoirs will decline as they gradually fill with sediment.

(5) Floodwater retarding pools will periodically inundate a maximum of 851 acres of land in addition to the 649 acres of permanent water surface.

(6) Installation of the structural measures will cause localized, short-term increases in erosion, sediment damage and turbidity as a result of construction activities.

(7) Relocation of a business and 700 residents of a mobile home court will have social and economic effects.

(8) Public recreation development at structure 1 will generate increased vehicular traffic in the vicinity of the Ned Brown Preserve.

5. Alternatives

The residents of Upper Salt Creek Watershed recognize the need for a comprehensive approach to the solution of water resource related problems. The Sponsoring Local Organizations and the Soil Conservation Service agreed to the following objectives early in the planning process:

(1) Reduce erosion and increase rainfall infiltration by establishing land treatment measures which contribute directly to watershed protection and flood prevention.

(2) Attain a reduction of 85 to 90 percent in average annual floodwater damages in urban areas with consideration given to the 100-year frequency storm.

(3) Include recreation water where feasible in structural measures and increase maximum design capacity of associated recreational facilities for public use which would include a wide range of recreational activities because of the tremendous pressure from the metropolitan area.

(4) Include water resource improvement for recreation and/or wildlife in all suitable areas in order to improve the local environment and make the watershed a more esthetically desirable place in which to live.

There are several alternatives which would reduce or eliminate some of the adverse environmental effects listed in section 4.

Land treatment alone is an alternative to the proposed project. This alternative would eliminate all the adverse effects listed in section 4. Floodwater damages would be reduced about two percent. This program has an estimated cost of $1,960,900.

Adding channel modification in reaches A through F and deleting structures 2 through 6 from the proposed project is an alternative that would reduce or eliminate the adverse effects associated with construction of the floodwater retarding structures. The disturbance and destruction of vegetative cover and the amount of land inundated by permanent and temporary pools at the storage sites would be reduced by 308 acres. Also, the erosion, sediment damage and increased turbidity associated with construction at the retarding sites would be reduced. However, this alternative would require construction of relatively large paved channels. For example, in reach D, without structures 4 and 5 in place, a 28-foot bottom width channel with 2:1 side slopes, 10.5 feet deep would be required to provide a 100-year level of protection. This would cost an estimated $155 per linear foot of constructed channel. Total cost in reach D would be $1,980,000 and in reach E would be $870,000. The total estimated cost of channel modification in reaches A through F, without structures 2 through 6 would be $10,300,000 plus the cost for modification or replacement of 32 bridges. The total costs for channel modification in reaches A through F and the additional storage necessary in structure 1, due to increased peak flows resulting from the channel modification, is estimated to be in excess of 20 million dollars. This alternative would require acquisition of an estimated 458 acres of channel right-of-way on which the vegetative cover would be disturbed. An estimated 60 homes would be directly affected requiring relocation of approximately 200 residents. Purchase or structural modification would be required for 8 apartment buildings and commercial establishments. In addition, this alternative would require added dredging of recreation storage at site 1 to compensate for the added flood storage.

Another alternative is a project including the measures described in the preceding paragraph with deletion of structure 1. This alternative would require that State of Illinois planned channel modification in Lower Salt Creek Watershed have added capacity to carry the peak flows generated from the upstream channel modification in reaches A through F. This alternative would eliminate the need for relocating the 700 residents of the trailer court and reduce the amount of land committed to reservoirs and related construction areas by 1,400 acres. Water-based recreation in the Ned Brown Preserve would be foregone. Project induced increases in vehicular traffic at this location would be reduced as residents sought recreation at other locations.

Flood plain management, in addition to the 261 acres of flood plain preserves included in the project is also an alternative which would eliminate the adverse effects. The land not included in the planned preserves is intensely developed or committed to development. Reduction of flood damages to the existing flood plain properties would require either direct purchase or floodproofing of these properties. Most of the properties are frame dwellings poorly suited to floodproofing measures.

Another alternative is leaving the environment in its existing condition and taking no PL-566 project action. Both the adverse and favorable effects of the project would be eliminated. Erosion, sediment, and floodwater damage reductions would be foregone. Urban development of flood plains with consequent increases in damagable values would continue. The need for water-based recreation would also continue. Net average annual monetary benefits foregone would total $1,327,800.

6. Relationship Between Local Short-Term Uses of Man's Environment and the Maintenance and Enhancement of Long-Term Productivity

An estimated 90 percent of the watershed area may be developed for urban uses during the next 20 years. Implementation of the Northeastern Illinois Planning Commission "Regional Open Space Plan" will prevent a portion of this development and increase the present 10 percent area held in forest preserves and other open space land. The project will, in addition to greatly reducing existing erosion, sediment, and floodwater damage, provide a means for the local sponsors to preserve areas now having development potential for public use. It is imperative that project action be taken within the near future because the pressing demand for land will increase land costs to a prohibitive level.

The project is compatible with the projected future long-term urban use of the watershed lands, and is consistent with the NIPC "Comprehensive General Plan" and the "Regional Open Space Plan". The project structural measures, with adequate maintenance, will continue to function, but with

decreasing effectiveness after the end of the 100-year evaluation period. The planned sediment storage capacity will gradually be depleted during the period resulting in loss of aquatic habitat and decreased incidental recreation. Sediment will then begin encroaching on the flood pools, thus reducing the effective flood storage. The result will be decreased levels of flood protection. At structure 1 the sediment will displace recreation storage before floodwater storage. At structures 2 and 3, where the sponsors will provide recreation storage, the same sequence will prevail. Therefore, these structures will have longer effective floodwater retarding lives.

To date, no PL-566 structural measures have been installed in subregion 0712. Two watersheds, covering a total of 727 square miles are authorized for planning assistance and work plans are scheduled for completion during 1973. A total of nine watersheds covering 1,451 square miles have applications approved for assistance by the states included in the subregion. Preliminary investigation reports for these watersheds are currently being prepared or scheduled for preparation. One report has been completed.

In addition to the PL-566 activities described above, Type IV river basin studies are currently being made in this subregion. The specific areas of study are the Kankakee River Basin, the Wisconsin portion of the Fox River Basin, and the Chicago Metropolitan Area River Basin. The purpose of these studies is to identify the water and related land resource needs and to propose solutions, including PL-566 action where appropriate, to satisfy these needs.

The works of improvement outlined for the Upper Salt Creek Project will have a direct effect upon a planned State of Illinois water resource project on the main stem of Salt Creek. This plan, prepared in 1955 by the Illinois Division of Waterways (now Division of Water Resource Management), proposed flood control and drainage improvements along Salt Creek from its outlet in the DesPlaines River for a distance of 36.8 river miles upstream to a point in the vicinity of Palatine. The plan includes channel improvement through most reaches of Salt Creek downstream from structure 1. To date land rights have been acquired for 7.4 miles of channel and construction has been completed on 6.5 miles. The Division is proceeding with right-of-way acquisition and construction as funds become available. Installation of the Upper Salt Creek Watershed Project will cause an appreciable savings in the cost of this planned downstream channel improvement. The estimated average annual savings amortized over the 100-year project life total $127,800.

The Upper Salt Creek Watershed project will affect runoff from 52 square miles which is only 0.5 percent of the water resource subregion area of 10,100 square miles. Therefore, the potential for this project to affect other downstream water resource projects is minimal. Project induced reductions in peak flow in the downstream Illinois River navigation channel and associated flood control works will be essentially unmeasurable relative to the existing contribution of other tributary drainage areas. However, the sediment storage and land treatment provisions of the Upper Salt Creek project have favorable effects on the amount of sediment available for delivery to downstream locations. Plans for future water resource improvement in downstream areas can be formulated with a 95 percent reduction in sediment delivered beyond structure 1 in Upper Salt Creek.

7. Irreversible and Irretrievable Commitments of Resources

Installation of the floodwater retarding and recreation structures will require in total approximately 1,708 acres including construction areas and sediment, beneficial use and retarding pools. Each of these uses commits land resources to varying degrees. Construction areas will utilize approximately 208 acres. About one-third or 70 acres will be permanently committed to spillways, embankments, access facilities, and structural appurtenances. The remaining 138 acres will be available for other uses.

The combined sediment and beneficial use pools will require 649 acres. This area will be permanently committed to water surface and available for water-related uses. Floodwater retarding pools will require 851 acres. Future use of this land will be restricted by periodic flooding. Such use would include recreation and wildlife habitat as planned at site 1.

The planned 1.8 miles of channel modification will require 26 acres of right-of-way. This area will be permanently committed to this use.

The public recreation development at site 1 will utilize approximately 1,400 acres in addition to the land devoted to dams, spillways, borrow areas, and pool areas. In most of this area, the land resources will be only slightly changed. Approximately 45 acres of grassland will be permanently committed to paved parking areas and approximately 11.5 miles of trails will be built. In general, the recreational development will not seriously restrict future uses of this area.

However, this 1,400 acre area is now largely within the Ned Brown Forest Preserve and it is committed to recreational use for the foreseeable future.

The 261 acres of flood plain dedication will in no way physically commit or alter resources. This land will remain available for low hazard-low intensity development consistent with occasional flooding.

With the exception of earth, rock, and processed materials such as concrete, steel, and asphalt, no other resource commitments are known to be required for this project.

Consultation with Appropriate Federal Agencies and Review by State and Local Agencies Developing and Enforcing Environmental Standards

a. General:

The sponsors' application for assistance under PL-566 was approved by then Governor Otto Kerner on June 30, 1965.

A preliminary investigation report indicating project feasibility was completed in May 1968 and presented to the sponsors. This report recommended that Salt Creek Watershed be divided into more than one unit for planning purposes. Copies of this report were sent to the Department of the Army, Corps of Engineers, and the State of Illinois Departments of Conservation and Public Works and Buildings. No adverse comments were made in response to the preliminary report.

In April 1969, the sponsors requested that SCS begin detailed planning of Upper Salt Creek Watershed, the unit chosen for initial planning. The Administrator of the Soil Conservation Service authorized the State Conservationist for Illinois to provide planning assistance to the sponsors in February 1970. Notice of receipt of planning authorization and a request for notification of interest was sent to 22 agencies. Seven agencies indicated interest in the project.

Planning activities were coordinated with the interested agencies. Approximately 30 meetings were held with interested agencies, the sponsors and local interest groups during the period of plan formulation. Because of the high degree of urbanization of the watershed, very close coordination between the SCS and the Metropolitan Sanitary District, the Cook County Forest Preserve District, and agencies of the State of Illinois was required. An informal field

review was conducted on February 28, 1972. Attendance included the sponsors, the watershed steering committee, the Illinois State Geological and Water Surveys, Illinois State Department of Business and Economic Development, the Cook County Highway Department and the Cook County Planning and Development Department. The purpose of this meeting was to present the work plan to the interested agencies and solicit their comments.

An active public information program was carried out during the planning process and is continuing into later phases of the project. Since the beginning of 1970, two television programs per year concerning the Salt Creek Watershed have been broadcast on metropolitan area stations. The most recent of these was a 10-minute show broadcast October 13, 1972, on a local TV station. The Salt Creek Watershed Project has also receive editorial and feature coverage in area newspapers.

Public information meetings announced in area newspapers and by newsletters of the watershed steering committee were held on October 28 and November 5, 1970. Respective attendances at these meetings were 57 and 256. Interest groups present included representatives of homeowners associations, the League of Women Voters, local boards of health and park districts, elected village officials and local environmental councils. The questions raised concerned the structural aspects of the project and water quality problems in Salt Creek. Reaction at these meetings was in support of the project as formulated.

(b) Discussions and Disposition of Each Problem, Objection, or Issue Raised on the Draft Environmental Statement by Federal, State, and Local Agencies, Private Organizations and Individuals

Comments were requested from the following agencies:

U. S. Department of the Army
U. S. Department of Commerce
U. S. Department of Health, Education, and Welfare
U. S. Department of the Interior
U. S. Department of Transportation
Environmental Protection Agency
Federal Power Commission
Governor of Illinois
Office of Planning and Analysis
Northeastern Illinois Planning Commission

Each of the above agencies responded. In addition, comments were received from the following:

National Audubon Society
Mr. George Benda
Mr. Neil Bratschaw

SUMMARY OF COMMENTS AND RESPONSES

Each issue, problem, or objection is summarized and a response given on the following pages. Comments are serially numbered where agencies have supplied multiple comments. The original letters of comment appear in Appendix E.

U. S. Department of the Army

Comment: The work plan and environmental statement are satisfactory. No conflicts between the proposed project and current or proposed projects of the Department are foreseen.

Response: None.

U. S. Department of Commerce

The Department of Commerce has reviewed the work plan and environmental statement and has no comment.

U. S. Department of Health, Education and Welfare

Comment: The project does not appear to represent a hazard to public health or safety.

Response: None.

U. S. Department of the Interior

(1) Comment: The proposed project will not affect any elements of the National Park System nor will it affect any sites eligible or considered potentially eligible for inclusion in the National Landmark Program.

Response: None.

(2) Comment: A discussion of project impacts upon mineral resources in the watershed should be included in the work plan and environmental statement. The volume of earth material resources, such as sand and gravel, committed by project action should be estimated. An appraisal of alternative uses for material excavated from the structure 1 pool should be made.

Response: Concur. Discussion of these items has been added to section 2.

(3) Comment: The beneficial effect of flood control on extraction of sand and gravel in the DuPage County Salt Creek area should be described in the statement.

Response: Concur. Discussion has been added to section 2.

(4) Comment: Terraines of the project area counties commonly slump or fail by sliding where slopes are steep, undercut, or overloaded. Any possible relationship between the project and this potential hazard should be discussed in the work plan and environmental statement.

Response: Geologic investigations of each of the proposed structure sites and channel indicate that stable structural measures are feasible at each of these sites. Embankments and cut slopes are designed with drainage facilities, gentle slopes and berms to insure their stability.

(5) Comment: The work plan and environmental statement should indicate that complex geologic conditions at structure sites 4, 5, and 6 will not result in adverse environmental effects relative to the structural measures.

Response: Concur. The work plan and statement have been modified to indicate this.

(6) Comment: For compliance with the Federal Reservoir Salvage Act (PL-86-523) it is requested that the Director, Northeast Region National Park Service be kept informed of progress of this proposal.

Response: Concur. The "Planned Project" section of the draft statement refers to the National Park Service. This reference has been clarified in the final statement.

(7) Comment: The proposed project gives reasonable consideration to fish and wildlife resources, in view of the watershed problems and the limited number of alternative solutions.

Response: None.

(8) Comment: The estimates of 480,000 visitor days for fishing and 50,000 visitor days for ice fishing at structure 1 are exceedingly high. The natural productivity of a typical reservoir of this size could not be expected to support a reasonable harvest for such a large number of anglers. This subject should be explained.

Response: The estimate of the fishing days for the structure 1 pool is based on measured usage of fishing lakes managed by the Cook County Forest Preserve District. The high demand for a place to fish is the most important factor in determining usage in this expanding population metropolitan area. Management of the reservoir, including fish stocking to supplement natural productivity, will be carried out by the Forest Preserve District.

(9) Comment: The use at structure 1 of snowmobiles, which is normally incompatible with the uses of a forest preserve, should be explained.

Response: Snowmobiling is recognized as a legitimate form of recreation in the Chicago metropolitan area and portions of Forest Preserves, including restricted portions of the Ned Brown Preserve, are open to regulated use. This type of recreation, when properly regulated, is not considered to be detrimental to the Forest Preserve values.

(10) Comment: The "low intensity - low hazard uses" indicated in the "Planned Project" section of the environmental statement should be further explained.

Response: Concur. Examples of these uses have been added to the statement.

(11) Comment: The "Environmental Setting" section should discuss archeological values in the watershed.

Response: Concur. A discussion of these values has been added.

(12) Comment: An archeological survey of the project area should be conducted for the following reasons:

a. To determine the extent and significance of archeological values

b. Determine project impacts

c. Define a salvage program

Response: As indicated in the "Planned Project" section the Illinois Archeological Survey reviewed the proposed structure and impoundment locations and indicated that with the exception of the flood pool area of structure 1, there are no known sites. The watershed is not recognized as an important archeological area. The work plan provision for pre-construction field studies and salvage will insure that archeological values will be preserved.

(13) Comment: The statement should contain evidence of contact with the State Liaison Officer for Historic Preser-

vation in regard to project effects upon sites which may be in the process of nomination for inclusion in the National Register of Historic Places.

Response: Concur. A copy of a letter from the Illinois Department of Conservation is included following the USDI letter in Appendix E.

14) Comment: The statement should include a discussion of steps taken for program and plan compliance with section 2(b) of Executive Order 11593.

Response: Concur. The statement indicates that the State Liaison Officer has been contacted.

15) Comment: The environmental effects of spoil disposal should be described in the "Impact" section.

Response: Concur. Discussion of this topic has been added.

16) Comment: Components of the natural ecosystem that would be affected by implementation of the proposed plan should be identified. For example, flood protection may provide incentive for higher forms of land use in the flood plain thereby resulting in damage or loss of natural ecosystems.

Response: The planned project will provide flood protection for areas which are already developed or committed to development. The natural ecosystems in these areas have already been extensively altered. The planned 261 acres of flood plain preserve will serve to preserve natural ecosystems by limiting the type of development in these areas to low intensity uses. The local communities may wish to preserve these areas as environmental corridors.

17) Comment: Project induced adverse effects on wildlife habitat have not been adequately described in section 2 or 4.

Response: These sections of the final statement contain additional information.

18) Comment: It is suggested that the effects of sediment encroachment upon the fishery value of the proposed pools be

discussed in section 6.

Response: The draft environmental statement included a short discussion of this in section 2. The final statement includes a clarified and strengthened discussion in sections 2 and 6.

U. S. Department of Transportation

The Department has no comments to offer nor objections to the proposed project.

U. S. Environmental Protection Agency

(1) Comment: The statement should describe the flood control plan for Lower Salt Creek and indicate its relationship to that for Upper Salt Creek.

Response: The plan for Upper Salt Creek includes measures which will reduce flood damages in the Upper Salt Creek flood plain to the maximum feasible extent. These measures will also act to reduce peak flows, flood stages, and flood damages in the Lower Salt Creek flood plain. A revised, coordinated plan for Lower Salt Creek is currently being developed by the Illinois Department of Transportation, Division of Water Resource Management in cooperation with Salt Creek Steering Committee and the SCS Chicago Metropolitan Area River Basin Staff. Project measures and their effects are being considered at the present time. The effectiveness of measures in Upper Salt Creek will not be influenced by those ultimately installed in Lower Salt Creek.

(2) Comment: Discharge structures of the multiple purpose and floodwater retarding structures should be designed to provide the maximum feasible turbulence and aeration in order to enhance downstream water quality.

Response: The spillways for structures 1, 2, and 3 provide the maximum feasible aeration. Structure 1 will have an overfall spillway similar to a natural waterfall. Water will move through a vertical drop, flow turbulently through a chute and collide with energy dissipating floor blocks which will convert the flow from turbulent to normal. Aeration will occur at the spillway crest, at impact onto the floor of the chute and at impact with the floor blocks. Under typical summer conditions,

as simulated by Devon Avenue Bridge data for 7-14-71, the dissolved oxygen level would be increased from 4.5 mg/1 to 7.0 mg/1 during spillway operation. This approaches the 8.08 mg/1 saturation level for water at the assumed 78 degrees F temperature.

Structures 2 and 3 will be equipped with overfall spillways, pipe outlets and stilling basins. Water will move through a vertical drop, flow turbulent through a pipe and plunge into a stilling basin. Aeration will take place at the crest, at impact with the floor of the spillway and at the stilling basin. On a summer day with water temperature of 78 degree F these structures would raise the level of dissolved oxygen by 55 and 43 percent respectively.

Additional description of structures 4, 5, and 6 has been added to the "Planned Project" section to clarify their operation. These structures will divert a small flow downstream which will remain relatively normal with little aeration. The larger discharges will flow down a chute into the detention pool and be evacuated by pump at a later time. Water flowing in the chutes will receive maximum aeration because of the numerous energy dissipating floor blocks in the chute. The evacuation pumps will produce velocities in the pipe flow nearing 50 fps. This water will be discharged with a high degree of turbulence into a stilling basin. Since structures 4, 5, and 6 will operate at 5,5 and 2 year frequencies respectively, the overall contribution to water quality enhancement will be minimal.

3) Comment: The environmental effects of modifying 1.8 miles of channel should be mitigated by installing channel features such as pool and riffle areas that simulate existing channel conditions.

Response: A report prepared in 1970 by the Illinois Department of Conservation described fish and wildlife resources in the watershed. This report did not indicate that there were extensive or important pool or riffle areas in Upper Salt Creek or its tributaries, nor did it recommend that mitigation measures simulating these features be included in the project. Riprap to be installed for erosion control in the downstream 3920 feet of channel

modification will incidentally simulate riffle conditions. Measures for enhancement and preservation of fish and wildlife resources as recommended in the report are included in the land treatment program.

(4) Comment: The intake structures for the evacuation pumps at structures 4, 5, and 6 should either be equipped with devices that prevent entrainment of fauna into the intake or provision should be made for a flow to return fauna to the reservoir.

Response: These structures will be designed to protect the pumps from damage caused by entrained objects. The intake structures will have trash racks and screens in series which will prevent the entrainment of objects and organisms. Small organisms including fish and microscopic fauna will be allowed to pass with the water through the intake.

(5) Comment: It may be necessary to provide sufficient inflow of adequate quality water to prevent algal blooms and associated fish kills at structures 4, 5, and 6 and the lateral pools of structure 1. The source of this enhancement water may be groundwater, either natural inflowing or pumped, or recirculation of water from Salt Creek.

Response: The inlet spillways of structures 4, 5, and 6 will operate at 5,5 and 2 year frequencies respectively. This means that water from Salt Creek will enter the sediment pools only once in every 5 or 2 years, on the average. Estimated inflows of relatively nutrient free groundwater will change the water in the sediment pools at frequencies of 1 and 4 months for structures 4 and 5. The estimated frequency for structure 6 is from 4 to 16 months. Thus, it can be seen that contributions of nutrients will occur relatively infrequently and that the combination of groundwater inflow and evacuation pumping to maintain a constant water surface elevation will maintain a relatively low trophic level in these pools.

Management for recreation at structures 4, 5, and 6 will be the responsibility of the sponsoring park districts. Periodic stocking, selective removal,

drawdown and removal of aquatic vegetation may be required to maintain the fisheries.

The lateral pools of structure 1 were added to decrease the amount of dredging necessary to provide a 10-foot minimum depth for water quality purposes. The problem of eutrophication at this site is discussed in the response to EPA comment (10).

(6) Comment: The flood of August 1972 resulted in aquifer contamination from polluted floodwater entering both abandoned and currently used wells. The statement should be directed to this problem and potential problems resulting from future relocations.

Response: A description of this type of problem has been added to the "Water and Related Land Resource Problems" section of the statement. Also, an assessment of related project effects has been added to the "Environmental Impact" section.

In regard to requirements for general construction and capping of wells in the area for prevention of aquifer contamination and protection of water users, existing laws regulate these activities. All wells and water well pumps installed in Illinois must meet the requirements of the Water Well Construction Code and the Water Well Pump Installation Code. These codes provide for protection from flood-borne contamination. Abandoned wells must be sealed in accordance with Rule XI-A of an act in relation to oil, gas, coal, and underground resources. Enforcement of these codes and Rule XI-A where it applies to water wells is the responsibility of the Illinois Department of Public Health. In regard to wells directly affected by project installation, construction plans will require conformance with State laws. This information has also been added to the "Planned Project" section.

(7) Comment: A continuous program of water quality monitoring at all impoundment structures should be established to insure that Illinois standards are met and maintained.

Response: The "Planned Project" section cites the sponsors' responsibility for meeting water quality standards where

water-based recreation is anticipated. This responsibility will require a cooperative effort between the sponsors, public health authorities, and the Illinois Environmental Protection Agency. The Metropolitan Sanitary District will periodically monitor floodwater quality. The Cook County Health Department will monitor water quality monthly or as needed under special circumstances such as a fish kill.

(8) Comment: It is suggested that the 920 acres of privately owned woodland remaining in the watershed be preserved as open space and not be developed for commercial or residential use.

Response: The value of preserving woodland tracts for public open space is recognized by SCS and the sponsors. The project formulated for Upper Salt Creek includes the maximum PL-566 cost sharing assistance for public recreation development. The decision to acquire additional land for open space must be made at the State, county, or local level of government.

(9) Comment: Current water quality information should be discussed in the environmental statement. Listed parameters should include phosphorus, nitrogen, biochemical oxygen demand, dissolved oxygen and carbon dioxide.

Response: Concur. A discussion of available water quality information has been added to the "Water and Related Land Resource Problems" section.

(10) Comment: Illinois Water Quality Standards for primary and secondary contact use require that phosphorus shall not exceed 0.05 mg/l in any reservoir or stream at the point of reservoir entry. Phosphorus removal may be required in the planned reservoirs to meet this standard or to prevent significant algal growth such as that which occurs at the Fullersburg Dam downstream from Busse Woods (Ned Brown Preserve). The statement should evaluate the potential eutrophication problem including the occurrence probability and the effect on recreational use of water.

Response: The Metropolitan Sanitary District has interpreted the State water quality standard for phosphorus in a

different manner. The 0.05 mg/l limit for phosphorus is meant to be used as a means of influencing agencies designing multiple-purpose reservoirs to take all possible precautions to prevent acceleration of the eutrophication process. This does not imply that any flow, upon entering a reservoir, must be treated if it exceeds the standards, but that all physical sources, such as upstream sewage outfalls should be removed or adequate treatment provided. If, after these measures are taken, the natural runoff continues to exceed State standards and eutrophication becomes a problem, then a control program should be implemented.

A program of water quality monitoring in cooperation with the Illinois State Water Survey has been initiated effective April 16, 1973. Algal growth potentials are being determined from samples collected twice weekly for a four-week period from collecting stations located at the Golf Road bridge and at Bisner Road on the West Branch. This initial program will be followed by one of lower intensity to be carried out by the sponsors. Analyses of the collected data will indicate eutrophication potential based on present conditions and will be used to formulate present condition management plans for the structure 1 reservoir.

Analysis of existing water quality data indicates it is unreasonable to assume that algal growths of similar magnitude to those at Fullersburg Park will occur at the structure 1 reservoir. The Fullersburg Dam is located 15 miles downstream from the Ned Brown Preserve. In the 13.6 mile reach between the Devon Avenue Bridge and Fullersburg Dam there are 10 sewage treatment plants discharging into the main stem of Salt Creek and several discharging into its tributaries. Recent mean phosphorus and ammonia nitrogen levels from Illinois Environmental Protection Agency monitoring stations are tabulated below:

Station No. & Location		Total Phosphorus As P - mg/l		Ammonia Nitrogen mg/l	
		1971	1972	1971	1972
	County Line				
GL-06	Devon Ave. Bridge	0.077	0.213	0.60	0.09
GL-01	Fullersburg Park	3.302	1.272	6.50	1.99

The influence of sewage effluents is shown by the high phosphorus and nitrogen values at GL-01. For phosphorus these values are 30 and 6 times those recorded for the GL-06 station during 1971 and 1972. For ammonia nitrogen the GL-01 values are 11 and 22 times those recorded for the GL-06 station during 1971 and 1972.

The Metropolitan Sanitary District plan for the Upper Salt Creek basin, as described in the "Water and Related Land Resource Problems" section, is currently being implemented. The Salt Creek Water Reclamation Plant is expected to be operational by late 1974. Operation of this plant, along with plans to divert combined sewage from Palatine into the Chicago underground storage project will eliminate sewage effluent as a source of phosphorus in Upper Salt Creek.

The responsibility for maintaining the adequacy of water quality for recreation at structure 1 rests with the Cook County Forest Preserve District and other agencies with regulatory power. Should water quality continue to be a problem after State effluent standards have been met in the watershed, the Forest Preserve District will, in cooperation with appropriate agencies, take whatever cooperative measures which are necessary to meet water quality standards at the reservoir and preserve its recreational potential. Such a program is already underway through the activities of the Cook County Clean Streams Committee. This committee, made up of interested citizens, operates under the guidance of the Cook County Forest Preserve District and works in complete cooperation with regulatory agencies at both the State and local levels.

Specific Forest Preserve measures could include construction of baffles in the inlet areas of the reservoir to provide sheltered locations for growth of duckweed. With periodic harvest and disposal of the duckweed, this method may remove up to 85 percent of the incoming nutrients. 1/ Periodic drawdown for oxidation of organic deposits and for management of aquatic vegetation and fish populations may also be practiced for improvement of water quality.

1/ Erlich, S., 1966, Two Experiments in the Biological Clarification of Stabilization Pond Effluents: Hydrobiologia, v. 8-27, Issue 1-2.

It is recognized that periodic impairments of water quality may adversely affect recreation at structure 1 under present conditions. However, the management expertise of the Cook County Forest Preserve District in combination with implementation of Metropolitan Sanitary District plans for pollution abatement will improve and maintain the recreational potential of this development.

(11) Comment: The statement should include a description of the climate in the project area.

Response: Concur. This information has been added to the "Environmental Setting" section.

(12) Comment: The location of channel excavation spoil sites should be indicated in the final statement.

Response: Concur. This information is given in the "Planned Project" section.

(13) Comment: Material excavated during channel construction should be analyzed for pollutants and disposed of in a manner to prevent contamination of Salt Creek.

Response: Approximately 80 percent of the excavated material will consist of uncontaminated soil from the channel banks. Significant quantities of sludge do not occur in the channel improvement reach. Description of the spoil disposal methods has been added to the "Planned Project" section.

(14) Comment: The Metropolitan Sanitary District project for sewage treatment in the Upper Salt Creek Basin should be described in greater detail in the statement. The effect of this project upon the discharges of Salt Creek above the Salt Creek Water Reclamation Plant site should be discussed.

Response: Concur. The description of the MSD project has been revised in the "Water and Related Land Resource Problems" section.

(15) Comment: The recreation development around structure 1 and a new I-90 interchange at Biesterfield Road will result in more rapid growth in this area. Discuss the ability of the municipalities to provide increased services generated by this growth.

Response: The development trends in the area surrounding the Ned Brown Preserve are well established. Recreation development at structure 1 will not stimulate added growth in this area. The ability of the communities to provide services, with the exception of those related to vehicular traffic, will be unaffected. Project induced vehicular traffic increases are discussed in EPA comment(30.)

(16) Comment: The statement should contain additional detailed discussion of the provisions made for disposal of solid and sanitary wastes at the planned recreation sites.

Response: Concur. This information has been added to the "Planned Project" section.

(17) Comment: Neither the work plan nor draft environmental statement adequately addresses the problem of visitor safety at structures 2 through 6 where recreation is to be provided by the local sponsors. It is the opinion of EPA that project agreements between MSD and the sponsors should describe the legal responsibility of the sponsors in regard to public safety. The work plan and environmental statement should reflect this position.

Response: The SCS is confident that the park districts sponsoring recreation at these sites can and will carry out their responsibilities in regard to public safety in accordance with State and local laws. Added description of these responsibilities are contained in the "Planned Project" section of the statement and in the "Provisions for Operation and Maintenance" section of the work plan. Measures for protection of the public from hazards associated with hydraulic features are described in the "Planned Project" and "Structural Measures" sections of the environmental statement and work plan respectively.

(18) Comment: The statement does not indicate the spoil disposal areas for structures 1 (north area), 2, and 3.

Response: The locations of these spoil disposal areas are contained in the final statement.

(19) Comment: The type of recreational facilities to be provided at structures 2 and 3 is not given in the statement or work plan.

Response: This information has been added to the "Planned Project" section of the environmental statement.

(20) Comment: Parking facilities installed in conjunction with this project should be equipped with infiltration grills to prevent total runoff.

Response: Parking lots will be installed in conformance with local codes. The lots can be equipped with devices that will control the release rate of the runoff and thus allow for a form of physical treatment by providing time for particulate material to settle out. The accumulated solids can then be removed through street cleaning operations. The need for features of this type will be determined on a case by case basis at the time of final design.

(21) Comment: What will be the effect on the project of the planned MSD underground storm water retention facility.

Response: The projects are fully compatible. The underground storm water retention project will service the combined sewer areas of Palatine and will eventually eliminate all combined sewer outfalls into Salt Creek.

(22) Comment: The pollution problem caused by septic field areas should be described in more detail. Included should be the number of systems involved, what agency has responsibility for sanitary collection and treatment, including an implementation schedule. Illinois EPA should be requested to provide assistance in assessing the septic system pollution problem.

Response: Concur. Additional description is contained in the "Water and Related Land Resource Problems" section. The Cook County Health Department has provided assistance.

(23) Comment: The esthetic impact of the planned low earth levees to protect the Busse Forest Nature Preserve should be discussed.

Response: Concur. This information has been added to section 2.

(24) Comment: The problem of public and private access to all parts of the Nature Preserve should be discussed.

Response: Access is regulated by the Illinois Nature Preserves Commission and is allowed only to the extent that natural conditions are not impaired. Development of structure 1 will not affect access to this preserve.

(25) Comment: The effect of the floodwater retarding structures upon groundwater in adjacent areas, including possible impacts on structure foundations and drainage facilities, should be discussed.

Response: Concur. A discussion of this item has been added to section 2.

(26) Comment: The reduction of floodwater damages associated with storm sewer backup will reduce the public health hazard caused by polluted and stagnant pools of floodwater.

Response: Concur. Discussion has been added to sections 2 and 3.

(27) Comment: The adverse effects resulting from conversion of a woodland environment to an aquatic environment at structure 1 should be discussed in greater detail in the statement.

Response: Concur. Discussion has been added to sections 2 and 4.

(28) Comment: Channelization usually increases stream velocities which result in increased sediment loads. How will this sediment increase affect the fishery at structure 1?

Response: The maximum stream velocity in Reach F will be increased 40 percent from 4.3 to 6.0 feet per second as a result of channel work. This increase in velocity raises the sediment carrying capacity but not necessarily the sediment load which is a function of the availability and character of sediment. There will be slight increases in sediment load during construction due to disturbance of the channel perimeter and water agitation. However, when the planned riprap channel protection measures are completed and vegetation is established, the channel perimeter will not be a significant source of sediment. The overall project effect will be decreased stream borne sediment. The short term increase in sediment delivered to the upper end of the structure 1 pool will not adversely affect the fishery.

(29) Comment: The statement should include an estimate of the effects of polluted storm water on the structure 1 fish population.

Response: Storm water runoff is not expected to have significant effects upon the fishery at structure 1. Approximately 30 percent of the lakes managed by the Cook County Forest Preserve District have important inflow of urban storm water runoff. These lakes are managed efficiently for both warm and cold water fisheries and no significant water quality problems resulting from storm water runoff have been experienced by the District.

(30) Comment: The "Environmental Impact" section of the statement should indicate present and 1990 Average Daily Traffic data for the area surrounding the structure 1 development. Streets or highways which need modification as a result of the project-induced recreation traffic increase and the effects on communities and access to St. Alexius Hospital should be discussed.

Response: Concur. Discussion has been added to sections 2 and 4. Modification of the "Village Thoroughfare Plan" will be necessary to adequately handle the recreation traffic. Local traffic originating west of Rohlwing Road will need safe and convenient access to the village facilities along Biesterfield Road between Bisner and Arlington Heights Roads. Emergency and service vehicles will need access east and west from the business district. Recommendations in the Thomas Report to modify the plan include diverting eastbound traffic on Biesterfield Road north or south on Arlington Heights Road. Local residents east of Arlington Heights will be inconvenienced by longer traffic routes on their return trips, but this will be necessary to shelter the area from recreation traffic. The increased traffic on Cosman Road will require wider traffic lanes to handle the recreation traffic. High barrier curbs recommended along Cosman Road, Bisner Road, and Arlington Heights Road will inconvenience local residents and traffic flow will be restricted to selected entry roads to the Preserve or to the residential area. This modification will be necessary to reduce the impact on residential areas within the village. The addition of weekend traffic patrols will also be needed. Village officials are aware of these needs through information presented to them in the Thomas Report.

(31) Comment: It is the opinion of EPA that the emphasis in flood damage prevention must change from hydrologic system alteration to land use modification if long term decreases in flood damages are to be realized. A number of non-structural alternatives should be evaluated before proceeding with a structural alternative alone. These alternatives are listed below:

a. Damage limitation by use of building codes and permit systems.

b. Flood forecasting to predict flood stage arrival times.

c. Regulation of flood plain land development through zoning and subdivision regulations.

The final statement should discuss all structural, non-structural, and combination alternatives. Costs, benefits, and effects should be indicated.

Response: The planned project is not one of ".... a structural alternative alone". It effectively combines land treatment and structural measures for flood damage reduction. "Structural measures" in PL-566 usage include water flow control measures (such as flood plain preserves) which are referred to as "non-structural" by EPA. The land treatment program contains elements referred to by EPA as non-structural. The plan includes flood plain preserves and land use regulations to prevent increases in damagable values. The planned land treatment program will provide non-structural types of assistance in areas sustaining with-project residual damages.

Discussion of alternatives a, b, and c follows:

a. Building codes and permit systems are of value for preventing damage in undeveloped areas. However, this alternative offers no solution for flood damage reduction to existing developments. Assistance to local units of government in formulating effective flood plain ordinances will include elements of this alternative.

b. Forecasting of flood stages and arrival times is not a viable alternative for preventing major flood damages in a watershed of this size and character. Rainfall and runoff occur at a rate which produce peak discharges in from 10 to 30 hours. This amount of time is not adequate for preparations to reduce flood damages.

c. Regulation of flood plain land development through zoning and subdivision regulations is a useful method of preventing flood damages. Villages within the watershed have flood plain land use ordinances. This method has been included in the plan to the maximum practicable extent as described in the "Planned Project" section. Additional descriptive material is presented to clarify the use of this method in the plan.

The alternatives discussed in section 5 have been clarified in the final statement.

(32) Comment: The relationship of damage reductions in Upper Salt Creek Watershed resulting from planned channel improvement of Lower Salt Creek should be clarified.

Response: See response to EPA comment (1).

(33) Comment: All wetlands should be dedicated to wildlife habitat and public enjoyment.

Response: The land treatment program will encourage preservation of important or valuable wetland areas. SCS technical assistance involving drainage will not be provided for types 3, 4, and 5 wetlands as defined in U. S. Fish and Wildlife Service Circular 39.

(34) Comment: The draft environmental statement does not properly discuss those resources which will be irreversibly and irretrievably committed by the project. The land resources described in the statement are not irreversibly and irretrievably committed. Discussion of resources such as earth fill materials, channel lining, landscape materials, mature tree stands, and land zoned as floodways should be added.

Response: The resources discussed in this section are committed for the 100-year life of the project. They are irreversibly and irretrievably committed relative to the life times of the present area residents. The earth, rock, and processed materials such as concrete, steel, and asphalt are in a like manner committed for the life of the project. The final statement contains additional discussion.

(35) Comment: Comments made at the public meetings should be summarized in section 8.

Response: A general description of public comments is included in this section.

Comments on the work plan were received separately. These were essentially similar to the preceding EPA comments (1), (5), (17), (18), and (19).

Federal Power Commission

Comment: There are no existing power plants or known plans for future development of electric power that would be affected by the proposed project. The proposed reservoirs are unsuitable for production of hydroelectric power.

Response: None.

Governor of Illinois

Comment: The Natural Resource Development Board has reviewed the project and found it to be in accord with the policies and needs of the State of Illinois.

Response: None.

Office of Planning and Analysis

Comment: The State Clearinghouse and the Natural Resource Development Board have no adverse comment to make on the draft environmental statement.

Response: None.

(3) Comment: The Audubon Society would prefer that only plant species native to Illinois be used in re-establishing vegetation, particularly near Forest Preserve areas. The planned methods for protecting existing vegetation must be outlined.

Response: Vegetation will be removed only where required for earthwork and reservoir clearing. Disturbance of vegetation in adjacent areas will be minimized. The primary purpose of establishing vegetation on structural measures is to protect them from erosion. Revegetation will conform to SCS standards and specifications. Several factors affect the choice of species to be used. General soil conditions including nutrient levels, slope and drainage characteristics are the primary factors. Also important among these are ease of establishment, climatic suitability, anticipated use intensity of the area and compatibility with vegetation in adjacent areas. The maintenance requirements of the species as well as their availability of seed or stock must also be considered. Experience indicates that non-native species have better performance characteristics than the native species.

(4) Comment: It is misleading to cite the limited nature of water-based recreational facilities in the watershed and apply the demands of six million people living within a 25-mile radius against this supply to demonstrate the need. The extent of existing facilities, which includes Lake Michigan, within the 25-mile radius should be described.

Response: The "Action Plan for Outdoor Recreation in Illinois" shows a deficiency of over 400,000 acres for outdoor recreation use in Region I (which includes Cook, Lake, and DuPage Counties). Data from this publication, the Cook County Forest Preserve District, and the Northeastern Illinois Planning Commission were used as a basis for estimating the water-based recreational needs of the area. Existing water-based recreational facilities in the area, including those on Lake Michigan, were considered in developing the needs. The proposed water-based recreation facilities in the plan will not satisfy the present or projected needs of the area. There will still be a large unfilled need for water-based recreational facilities in the area.

Mr. George J. Benda

(1) Comment: Section 1 of the environmental statement does not adequately describe current water quality problems.

Response: See response to EPA comment (9).

(2) Comment: The Metropolitan Sanitary District project for the Upper Salt Creek basin should be described in greater detail with emphasis on how this project will affect the flow of Salt Creek above the Salt Creek Water reclamation plant.

Response: See response to EPA comment (14).

(3) Comment: The possibility of eutrophication of the reservoir at structure 1 and possible effects on the recreation potential is disregarded in the draft environmental statement.

Response: See response to EPA comment (10).

(4) Comment: The consultation section of the draft environmental statement inaccurately represents public opinion. The project has changed since the last public information meeting held in November 1970 and it can be assumed that public opinion has changed. Additional public information meetings should be conducted to sample current public opinion.

Response: The description of public opinion in this section is based on records of the meetings. There have been no substantial changes in the project since the last meeting in 1970 and there are no indications that public opinion has changed. In fact, floods during August 1972 alerted many citizens to environmental problems and support of the project has increased. The media have continued their attention to the project and information has continued to flow to the public.

(5) Comment: A significant portion of the draft statement is directed toward means of protecting the Busse Forest Nature Preserve. Why is the Illinois Nature Preserve Commission not included in the list of commenting agencies?

Response: Formal comments are requested only from those State agencies to which the Governor has delegated review responsibility, in accordance with Executive Order 10913. The Illinois Nature Preserves Commission was directly involved in formulating the protective measures described in the "Planned Project" section.

Mr. Neal Bratschaw

(1) Comment: The draft environmental statement does not consider the problem of eutrophication at structure 1.

Response: See response to EPA comment (10).

(2) Comment: The final statement should evaluate water quality parameters other than fecal coliform. Information should be presented in tabular form.

Response: See response to EPA comment (9).

(3) Comment: A study should be carried out to determine the algal growth potential of the Busse Woods Reservoir. It is Mr. Bratschaw's opinion that the Busse Woods Reservoir will have heavy algal blooms as occur at the Fullersburg Dam on Salt Creek in DuPage County.

Response: See response to EPA comment (10).

(4) Comment: The alternatives section of the draft environmental statement is inadequate. Public ownership of flood plains, which is the only permanent solution to the flooding problem, should be considered. Flood plain management should be given more attention in this section.

Response: Alternatives discussed in section 5 are limited to those that are reasonable and not remote or speculative. Public purchase of the flood plains is not considered to be reasonable alternative and is therefore not included in this section. The response to EPA comment (31) gives additional discussion of flood plain management.

(5) Comment: The proposed recreation development could be detrimental to the natural values of existing park land. An increase in usage is an absolute detriment.

Response: The planned recreation development of the Ned Brown Preserve was formulated by the Cook County Forest Preserve District. The function of this agency is to preserve and develop natural areas for public use. The Soil Conservation Service is confident that the development will be managed by the District to provide maximum public benefits with minimal disturbance of natural values.

9. List of Appendices

Appendix A -- Sketch of floodwater retarding and storage reservoir

Appendix B -- Layout sketch of structure 5

Appendix C -- Structure 1 public recreation development map

Appendix D -- Work plan table 6 -- Comparison of Benefits and Cost for Structural Measures

Appendix E -- Letters of comment received on draft environmental statement

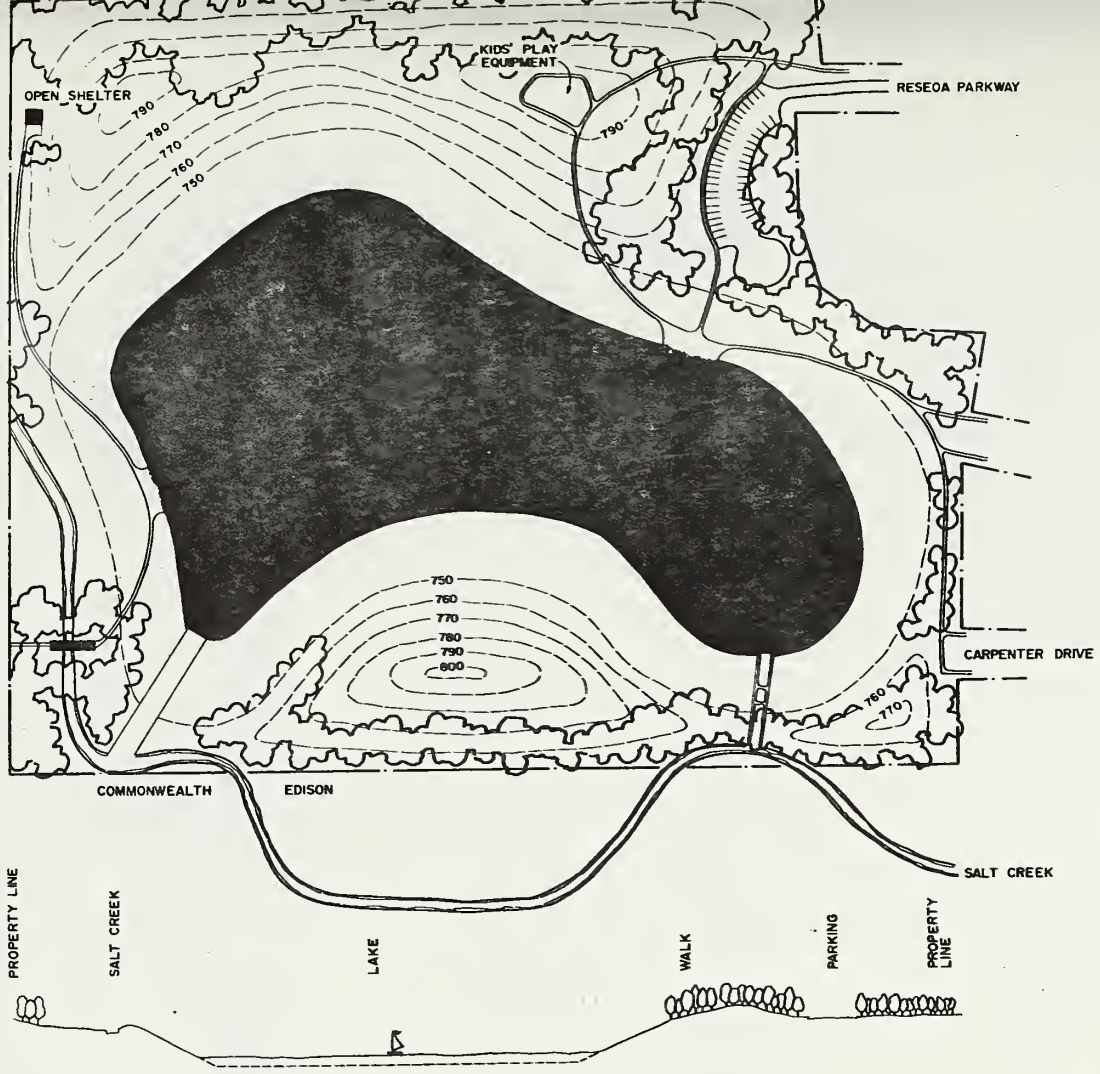
Appendix F -- Project map

APPROVED BY Kenneth E. Grant
Kenneth E. Grant
Administrator

DATE MAY 14 1973

Floodwater retarding and storage reservoir

USDA SCS LINCOLN NEBR 1984



LEGEND

NORMAL POOL ELEVATION ___ 705.0
NORMAL POOL AREA _____ 9.0 ACRES
FLOOD POOL ELEVATION ___ 742.4
FLOOD POOL AREA _____ 17.6 ACRES
NORMAL POOL _____

N

LAYOUT SKETCH

UPPER SALT CREEK WATERSHED

STRUCTURE NO. 5

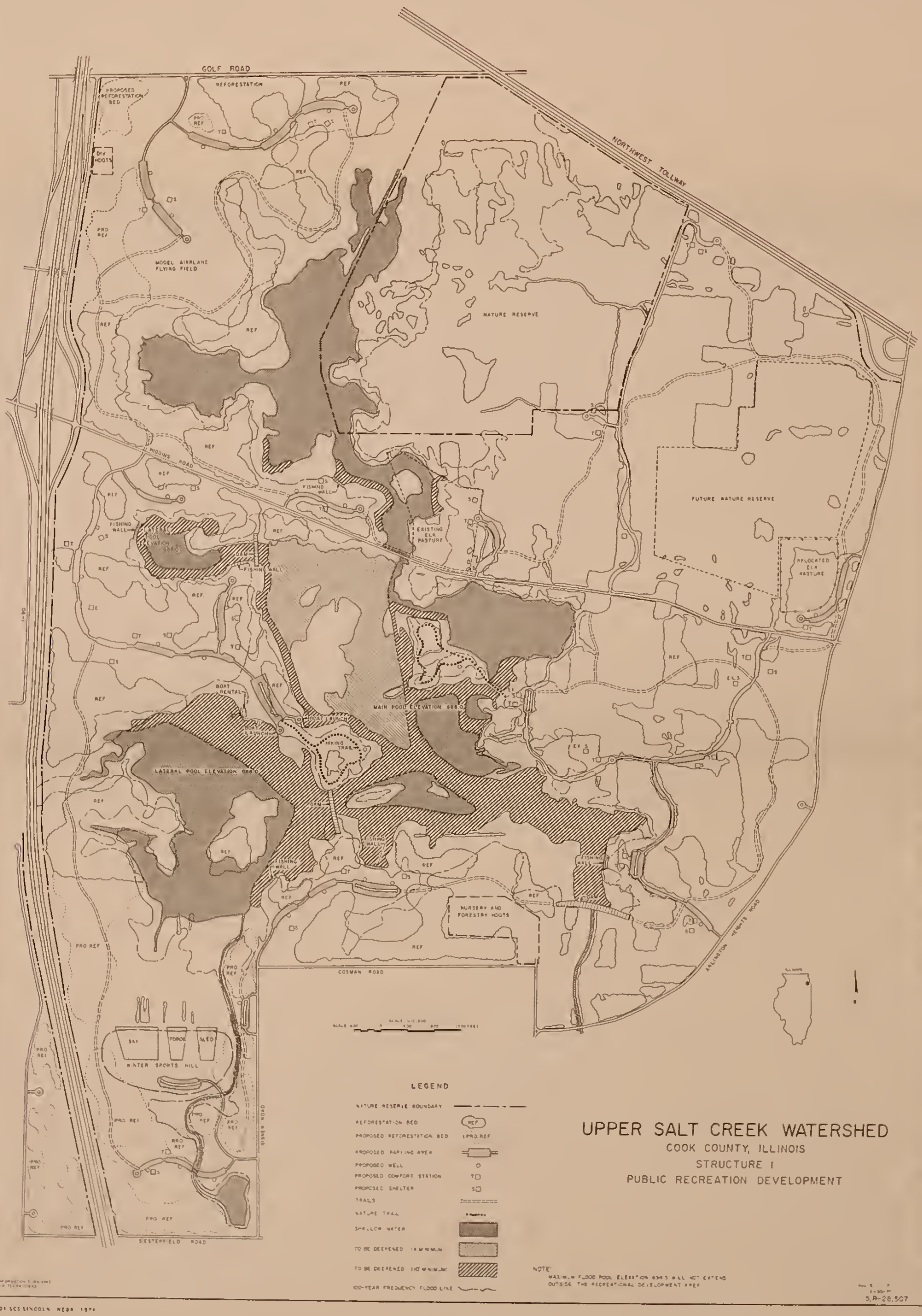
SOURCE: Data provided by Field Technician

5-24-71
5,E-29,283

APPENDIX B

U S DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE



LEGEND

- NATURE RESERVE BOUNDARY
- REFORESTATION BED (REF)
- PROPOSED REFORESTATION BED (PRO REF)
- PROPOSED PARKING AREA
- PROPOSED WELL
- PROPOSED COMFORT STATION (TO)
- PROPOSED SHELTER (SO)
- TRAILS
- NATURE TRAIL
- SHALLOW WATER
- TO BE DEEPENED (MINIMUM)
- TO BE DEEPENED (MAXIMUM)
- 100-YEAR FREQUENCY FLOOD LINE

UPPER SALT CREEK WATERSHED

COOK COUNTY, ILLINOIS

STRUCTURE 1

PUBLIC RECREATION DEVELOPMENT

NOTE:
MAXIMUM FLOOD POOL ELEVATION 694.3 WILL NOT EXTEND OUTSIDE THE RECREATIONAL DEVELOPMENT AREA

SOURCE
BASE INFORMATION FURNISHED BY [illegible]

I-90

S.A-28,507

APPENDIX C

USDI SCS LINCOLN NEBR 1971

TABLE 6 - COMPARISON OF BENEFITS AND COSTS FOR STRUCTURAL MEASURES

Upper Salt Creek Watershed, Illinois

(In Thousands of Dollars) 1/

Evaluation Unit	Damage 2/ Reduction	Recreation 3/	Other 4/	Secondary Benefits	Total	Average 5/ Annual Costs	Benefit Cost Ratio
Structural Measures	733.9	2,126.5	127.8	335.7	3,323.9	1,862.9	1.8:1.0
Project Administration						133.2	
GRAND TOTAL	733.9	2,126.5	127.8	335.7	3,323.9	1,996.1	1.6:1.0

1/ Price base - 1973
2/ In addition, it is estimated that land treatment measures will provide benefits of $15,000 annually.
3/ Incidental recreation of $180,000 are included.
4/ Consists of savings of costs for planned downstream channel improvement measures.
5/ From work plan, table 4.

DATE: MAY 1973

APPENDIX D

A P P E N D I X E

LETTERS OF COMMENT RECEIVED ON DRAFT ENVIRONMENTAL STATEMENT

STATE OF ILLINOIS

OFFICE OF THE GOVERNOR

SPRINGFIELD 62706

RICHARD B. OGILVIE
GOVERNOR

January 3, 1973

1973 JAN 8 PM 9 52

SOIL CONSERVATION SVC.
WASH., D.C.

Kenneth E. Grant, Administrator
United States Department of Agriculture
Soil Conservation Service
Washington D.C. 20250

Dear Mr. Grant:

The Illinois Natural Resources Development Board has reviewed the Salt Creek Workplan and have indicated that it is in accord with the policies and needs of the State of Illinois.

We wish to commend you and the Soil Conservation Service for your efforts in the development of what we consider to be a very fine plan.

It is our hope that the plan will be approved for operation in the very near future.

Very truly yours,

Richard B. Ogilvie
Governor

cc: Gordon L. Ropp Director of Agriculture
Howard Busch State Conservationist
Soil Conservation Service
P.O. Box 678
200 Church Street
Champaign, Illinois 61820

DEPARTMENT OF THE ARMY
OFFICE OF THE UNDER SECRETARY
WASHINGTON, D.C. 20310

30 JAN 1973

Honorable Thomas K. Cowden
Assistant Secretary of Agriculture
Washington, D. C. 20250

Dear Dr. Cowden:

In compliance with the provisions of Section 5 of Public Law 566, 83d Congress, the Administrator of the Soil Conservation Service, by letter of 30 November 1972, requested the views of the Secretary of the Army on the work plan for Upper Salt Creek Watershed, Illinois.

We have reviewed this work plan and foresee no conflict with any projects or current proposals of this Department. It is noted that the watershed is rapidly becoming urbanized and that essentially all of the estimated flood damages and flood control benefits would be urban rather than agricultural. The draft environmental statement is generally considered to be satisfactory and responsive to the requirements of Public Law 91-190, 91st Congress, insofar as this Department is concerned.

Sincerely,

Charles R. Ford

for Kenneth E. BeLieu
Under Secretary of the Army

Deputy Administrator for Watersheds

THE ASSISTANT SECRETARY OF COMMERCE
Washington, D.C. 20230

January 22, 1973

Mr. Kenneth E. Grant
Administrator
U.S. Department of Agriculture
Soil Conservation Service
Washington, D.C. 20250

Dear Mr. Grant:

The work plan and draft environmental statement for Upper Salt Creek Watershed, Illinois, which accompanied your letter of November 27, 1972, has been received by the Department of Commerce for review and comment.

The Department of Commerce has reviewed the work plan and draft environmental statement and has no comment.

We are pleased to have been offered the opportunity to comment on the work plan and statement.

Sincerely,

Sidney R. Galler

Sidney R. Galler
Deputy Assistant Secretary
for Environmental Affairs

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20201

[illegible] 1973

Mr. Kenneth E. Grant
Administrator
Soil Conservation Service
U.S. Department of Agriculture
Washington, D. C. 20250

Dear Mr. Grant:

This is in response to your letter of November 27, 1972, wherein you requested comments on the Watershed Work Plan and draft environmental impact statement for the Upper Salt Creek Watershed, Illinois.

The Department of Health, Education, and Welfare has reviewed the health aspects of the above project as presented in the documents submitted. This project does not appear to represent a hazard to public health and safety.

The opportunity to review the Watershed Work Plan and draft environmental impact statement is appreciated.

Sincerely yours,

Richard L. Seggel

Richard L. Seggel
Acting Assistant Secretary
for Health

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

ER-72/1370

1973 FEB 2 2 55

JAN 26 1973

SOIL CONSER[illegible] SVC.
WASH[illegible]

Dear Mr. Secretary:

This is in reply to a letter from your office dated November 27, 1972, requesting our views and comments on a report and draft environmental statement for the Upper Salt Creek Watershed, Illinois.

The proposed project will not impact on any elements of the National Park System nor will it affect any historic, natural, or environmental education sites eligible or considered potentially eligible for inclusion in the National Landmark Programs.

Both the work plan and draft environmental statement should discuss the project's impact on mineral resources. In Cook County, at least six sand and gravel pits have operated along Salt Creek. One prospective area for sand and gravel in secs. 22, 27, and 34, T.42N., R.10E., will be dedicated to flood plain preserves under the proposed work plan. A similar area is in secs. 25, T.41N., R.10E., and two sand and gravel pits are visible in the aerial photograph in the work plan. A third prospective area in secs. 20, 29, and 30, T41N., R.11E., is directly behind the multipurpose structure where it is planned to excavate for increased storage capacity using the material to build a winter sport hill to the south or next to Interstate 94 to the north. An attempt should be made to appraise other possible uses for this material, including an estimate of the yardage to be committed because of development. Downstream of the multipurpose structure, in Du Page County, over 20 miles of Salt Creek would benefit from flood protection. Large sources of sand and gravel could be quarried in the future as a result of this higher flood protection and the work plan and environmental statement could reflect this beneficial effect. No other known mineral resources are in the immediate vicinity of the project.

From a geologic standpoint, it should be noted that terraines of the project area counties (southeast of the project area) exhibit a tendence to slump when overloaded or undercut in

areas of steep fronted terraces or low rolling hills. Since the project area is characterized by similar topography and lithology, any possible relation between the proposed project and this potential hazard should be fully discussed in the work plan and the environmental statement.

Structure sites 3, 4, and 5 present complex foundation conditions (p. 72, work plan). Both the work plan and environmental statement should reflect that significant adverse environmental effects of geologically related aspects of the structural work are not anticipated.

For compliance with the Federal Reservoir Salvage Act (P.L. 86-523), we request that the Director, Northeast Region, National Park Service, 143 South Third Street, Philadelphia, Pennsylvania 19106, be kept informed of the progress of this proposal so that archeological work and any necessary salvage can be programmed and scheduled for completion prior to project construction and flooding. Should the parties of the Work Plan Agreement desire to initiate early action in response to the Federal Reservoir Salvage Act, the National Park Service can provide assistance in arranging for needed archeological work to be undertaken by a cooperating institution such as the Illinois Archeological Survey, on a reimbursable basis.

In view of the watershed problems and limited alternatives to correct them, the work plan gives reasonable consideration to fish and wildlife resources. In total, wildlife resources will sustain losses and the fishery resources will be expanded.

Wildlife habitat losses will be caused principally by the creation of the multipurpose reservoir complex. Terrestrial habitat loss and reduction in wildlife numbers will result from inundation and very intensive recreational use associated with the reservoirs. The reservoirs will very likely receive some use by waterfowl.

Proper management of the reservoirs will increase the warmwater fishery in the watershed and create local fishing opportunity. Without extensive corrective measures, any fishery which becomes established in the reservoirs will deteriorate as the pools fill with sediment and ultimately will be incapable of supporting a sport fishery.

The estimates of sport fishery use (p. 39) anticipated with the multipurpose reservoir are exceedingly high. The projected harvest of sport fish is clearly beyond the bounds of inherent natural productivity of a typical reservoir. An explanation of this subject is needed. Similarly, an explanation is needed regarding the use of snowmobiles within the development. Snowmobiling normally is incompatible with other forms of recreation and use associated with a forest preserve district and a recreation development.

We have reviewed the draft environmental statement and submit the following comments for your consideration and use.

Planned Project - Page 9, paragraph 4, refers to planned use of the floodplain and states that certain reaches will receive only low intensity, low hazard use. We are uncertain as to the nature of these uses and suggest some examples or further explanation be furnished which would give specific meaning to "low intensity-low hazard use."

Environmental Setting - This section should contain a discussion on the archeological values and show whether such values are either present or absent. If any such values are present, the effects of the project on these cultural resources should be identified and discussed in terms of the appropriate sections of the statement. An archeological survey of the project area should be made to (1) determine whether or not such values exist, the significance and extent; (2) provide a basis for adequate evaluation for environmental statement needs; and (3) define any salvage program and costs needed to mitigate the damages to this resource base.

Environmental Impacts - The section should contain evidence of contact with the State Historical Preservation Officer and a copy of his comments as to the effect of this project on any historical or archeological resources which may be in the process of nomination to the National Register of Historic Places should be attached to the statement. For compliance, you may direct your inquiry to the Director, Department of Conservation, 102 State Office Building, 400 South Spring Street, Springfield, Illinois 62706.

The statement should include a discussion of steps taken for program and plan compliance with Section 2(b) of Executive Order 11593 of May 13, 1971, entitled "Protection and Enhancement of the Cultural Environment."

This section should assess the environmental effects of utilizing spoil disposal areas.

The impact section should be expanded to identify the components of the natural ecosystem that would be affected by the proposed work plan. For example, better flood protection may induce higher forms of land use in the flood plain and the natural setting of the area may be lost as a result of seeking a higher economic return on the lands. These tradeoffs should be fully discussed in the statement for the benefit of the decisionmakers.

Adverse Effects - This synopsis fails to state the adverse effect of the proposed project on wildlife. There will be a net loss in terrestrial wildlife habitat from installation of the structures and channel modifications and from inundation of land. Planned intensive recreational uses of the area, such as snowmobiling and picnicking, will further depress wildlife population. This section of the impact statement should not overlook this exchange in land use, particularly when land which retains a natural character is in such short supply in the Chicago metropolitan area.

Short-Term Uses vs. Long-Term Productivity - We suggest that this section discuss the effects of sediment encroachment more fully. Any fishery which becomes established in the reservoir will deteriorate as the pools fill with sediment and ultimately the reservoirs will not be capable of sustaining a reservoir fishery.

We wish to thank you for the opportunity to review the work plan and draft environmental statement for the Upper Salt Creek Watershed.

Sincerely yours,

Deputy Assistant Secretary of the Interior

Honorable Earl L. Butz
Secretary of Agriculture
Washington, D. C. 20250

Deputy Administrator for
Watersheds

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

MAILING ADDRESS:
U.S. COAST GUARD (GWS/83)
400 SEVENTH STREET SW.
WASHINGTON, D.C. 20590
PHONE: 426-2262

Honorable Kenneth E. Grant
Administrator, Soil Conservation
Service
Department of Agriculture
Washington, D. C. 20250

Dear Mr. Grant:

This is in response to your letter of 28 November 1972 addressed to Admiral Bender transmitting a draft environmental statement for the Upper Staff Creek Watershed, Illinois, for our review and comment.

The Department of Transportation has reviewed your proposed draft statement. We have no comments to offer and we have no objection to this project.

The opportunity for the Department of Transportation to review the proposed impact statement is appreciated.

Sincerely,

J. D. McCRIN
Captain, U. S. Coast Guard
Acting Chief, Office of Marine
Environment and Systems

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION V
1 NORTH WACKER DRIVE
CHICAGO, ILLINOIS 60606

JAN 15 1973

Mr. Kenneth E. Grant, Administrator
U.S. Department of Agriculture
Soil Conservation Service
Washington, D.C. 20250

Dear Mr. Grant:

We have completed our review of the Watershed Work Plan for the Upper Salt Creek Watershed Project, Lake, Dupage and Cook Counties, Illinois. In our opinion the project as stated, and with the additions suggested below, will provide a satisfactory mix of structural and non-structural flood control measures which should reduce the present frequency and severity of flooding in the watershed while providing a diversified recreational experience. Due to the burgeoning urban growth of this area this project should offer excellent opportunities as a laboratory for the development of novel and applicable legal approaches to the management of land and water resources. Our suggested modifications for the Watershed Work Plan are summarized below.

Major Modifications to the Proposed Project - After reviewing the Work Plan it appears that some form of continuous water inflow may be necessary to maintain water quality in the sediment/beneficial use pools of structures 4, 5 and 6 and the lateral pools of structure one during inter-flood periods. Alternative methods of providing this flow might consider modification of the structures to take advantage of the natural inflow of water from shallow aquifers, pumping water from these aquifers or recirculating water from Salt Creek. The latter would provide the least enhancing effect since the waters of Salt Creek are undoubtedly already productive from the cumulative effects of natural soil erosion, combined and storm sewer flows. This flow should, at the very least, be adequate to meet the Illinois standard for dissolved oxygen of 6 mg/l for 16 continuous hours of any 24 hour period and a minimum of 5 mg/l at all times.

If provisions for visitor safety at the recreation facilities of structures 2, 3, 4, 5 and 6 are included in the agreements between the local sponsors and the MSD then this should be mentioned in the discussion of the operation and maintenance agreements. While the SCS may not have legal responsibilities in this matter, we believe that they should actively and publicly support such an addition to the project agreements to ensure that the Watershed project goal of providing the maximum amount of recreation potential will be achieved; and further, to ensure that these facilities, once installed, will experience the greatest possible use consistant with sound management practices. Local assurances of proper supervision and use of facilities are a must in this regard.

Minor Modifications to the Watershed Work Plan - A number of points discussed in the Work Plan require further clarification to provide the reader with a complete understanding of the project features and their possible impact on the environment.

1. We realize that the proposed watershed project and State channelization project are complementary and that an elimination of the proposed PL 566 project would require a more extensive channeliza project. However, the Work Plan is unclear as to what the result wou be if the State project were not completed on schedule.

2. The spoil disposal areas for structures 2 and 3 and the secor spoil area for structure 1 should be identified and the amount of material consigned to each should be mentioned. The ownership of the land and the legal arrangements involved in using this area, should also be mentioned.

3. The Work Plan gives very little information about the plans for incidental recreation at structures 2 and 3.

If the local sponsors can provide additional information on the type of recreation facilities planned for these areas, then this should be included in the discussion.

Sincerely yours,

Valdas V. Adamkus

Valdas V. Adamkus
Acting Regional Administrator

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION V
1 NORTH WACKER DRIVE
CHICAGO, ILLINOIS 60606

January 24, 1973

Mr. Kenneth E. Grant, Administrator
U. S. Department of Agriculture
Soil Conservation Service
Washington, D. C. 20250

Dear Mr. Grant:

We have completed our review of the Draft Environmental Impact Statement (EIS) for the Upper Salt Creek Watershed, Cook, Lake and DuPage Counties, Illinois, as requested in your letter of November 27, 1972. Our comments on the Work Plan for this project were sent to you in a separate letter on January 15, 1973.

Our comments for this project have been classified as Category ER-2, specifically we believe that the Draft EIS does not contain sufficient information to assess fully the environmental impact of the proposed project. However, from the information submitted, we have reservations concerning the environmental effects of certain aspects of the project.

Our primary concern is the maintenance of water quality in the proposed impoundments and in the creek subsequent to project construction. While the project will provide badly needed flood protection to a rapidly urbanizing area, we believe that careful management and operation will be required in order to meet State water quality standards.

We appreciate the opportunity to review this Draft EIS. Please send us five copies of the Final EIS when it is made available to the Council on Environmental Quality.

Sincerely yours,

Merle W. Tellekson

Merle W. Tellekson
Acting Director, Surveillance
and Analysis Division

Attachment

1. Description. The EIS should include a description of flood control measures for the Lower Salt Creek Watershed. Total flood control plans for the entire creek length should be established in order to provide a coordinated plan.

The discharge structures of the floodwater retarding structures and the multiple-purpose structure should be designed to provide the maximum feasible turbulance and reaeration of discharged flows so that downstream water quality will be enhanced.

It appears that the use of floodwater retarding structures is maximized. From an environmental viewpoint, floodwater retarding structures are more desirable than channel modifications to reduce floodwater damage. The environmental effects of the estimated 1.8 miles of channel improvement should be mitigated by installing channel features, such as pools and riffle areas, that simulated natural channel conditions before alterations were made.

The intakes for the pumps used to evacuate structures 4, 5, and 6 should either be equipped with devices that prevent entrainment of fauna in the intake, or a return flow to the reservoir should be provided to return fauna entrained in the intake.

It may be necessary to modify the proposed project to provide for a sufficient flow of groundwater through structures 4, 5, and 6 and the lateral pools of structure 1 to control algal blooms and prevent associated fish kills. This flow should be provided in such a manner as to minimize the adverse effects on private well operations. The flow provided should at least be sufficient to meet the Illinois standard of 6 mg/l of dissolved oxygen for 16 continuous hours of any 24 hour period and 5 mg/l of DO at all times. Winter kill could be a very significant factor in the maintenance of a fishery at these structures. If a natural water inflow cannot be encouraged, the pumping of groundwater or the recirculation of Salt Creek water might be considered. The latter would probably have the least enhancing effect since the water of Salt Creek is undoubtedly polluted due to the cumulative effects of natural erosion, combined and storm sewer flows.

During the storm and subsequent flooding of August, 1972, many of the wells serving the residents in this area were contaminated. Further investigation by the DuPage County Health Authorities showed that the aquifer supplying these wells was polluted, not only by the wells in use, but by many wells which were abandoned during recent improvements to State Highway 83. Allegedly, these wells were not capped properly, and contaminated water was allowed to enter the aquifer during high water. The EIS should address methods to locate and correct improperly capped wells, as well as methods to properly cap wells abandoned by future relocation.

A continuous program of monitoring the water quality in all structures should be established to insure that all Illinois standards are met and maintained.

We suggest that the remaining 920 acres of privately owned woodlands be retained as open space and not developed for commercial or residential use.

On page 6 it is stated that "tests made regularly by the Sanitary Water Board... indicate that the fecal coliform 10-year average readings slightly exceed the established standards for recreation." This statement implies that the tests reflect the conditions of today, when in fact the Sanitary Water Board was replaced by the Illinois Environmental Protection Agency over two years ago. In addition, the statement implies that fecal coliform is the only parameter for water based recreation. A more current listing of all water quality parameters including: phosphorus, nitrogen, biochemical oxygen demand, dissolved oxygen, and carbon dioxide is needed to indicate water quality. The phosphorus parameter is important because the Illinois Water Quality Standards state that phosphorus shall not exceed 0.05 mg/l in any reservoir or lake, or in any stream at the point where it enters any reservoir or lake. Phosphorus removal from Salt Creek may be required to meet the standard. The EIS does not mention the possibility of eutrophication in the proposed reservoirs. Excess phosphorus in Salt Creek can result in significant algal growths, such as those at Fullersburg dam downstream from Busse Woods. The EIS should address the problem of eutrophication including the probability of occurrance, the degree of impact and the adverse effects upon the recreation potential.

This section should include a brief description of the climate of the area, including the annual temperature range and the character, amount and seasonal distribution of precipitation.

The location of dredge spoil sites should be included in the EIS. This material obtained from the channelization should be analyzed for pollutants and be disposed of in a manner so as not to be reintroduced into Salt Creek.

The Metropolitan Sanitary District project for the Upper Salt Creek Basin is mentioned in this section. This project should be described in greater detail, especially how this project will affect the flow of Salt Creek above the Elk Grove Sewage Treatment Plant site.

2. Environmental Impact. The completion of this project and the addition of an interchange at Blisterfield Road and I-90 will result in a more rapid growth in this area. In light of this growth, the ability of the municipalities to provide services should be discussed in the EIS. What effect will this new interchange and increased traffic have on Alexian Brothers Hospital?

In regard to the proposed recreation areas, the provision of facilities to collect and dispose of solid wastes and refuse and facilities for collection and disposal of sanitary wastes from the recreational facilities should be discussed in more detail.

Neither the EIS nor the Watershed Work Plan adequately addresses the problem of visitor safety at the recreation facilities provided by the local sponsors. We believe that while the legal responsibility for insuring the proper use of these facilities rests with the local sponsors and the Metropolitan Sanitary District, the Soil Conservation Service should actively and publicly support such an addition to the project agreements and adopt this position in the Watershed Work Plan and the Environmental Impact Statement.

The EIS does not indicate the spoil disposal areas for structures 2 and 3 and the second spoils area north of structure 1. Neither the Work Plan nor the Environmental Statement gives any indication of the type of recreation facilities to be provided at structures 2 and 3.

The parking lots should be equipped with infiltration grills to prevent total runoff. In highly urbanized areas polluted runoff is a significant source of pollution. The storm water retention facilities required by the Metropolitan Sanitary District of Greater Chicago in new developments to prevent flooding should be designed and used to provide at least sedimentation treatment of urban storm runoff. How will the proposed MSD's underground storm water retention plan effect this project?

The problem of pollution from septic fields should be discussed in more detail. Especially important are who has jurisdiction for waste collection in the unsewered areas, the number of such systems involved, and specific plans for collection and treatment including schedule of implementation. The Soil Conservation Service should request the Illinois Environmental Protection Agency to assess the pollutional effects resulting from these septic systems at Inverness.

The aesthetic impact of the low earth levees in Busse Forest Nature Preserve and the problem of public and private access to all parts of the forest should be discussed.

The effects of the proposed reservoirs and flood water retarding structures on the water table of adjacent, poorly drained areas should similarly be discussed as a possible impact on drainage operations, structure foundations, etc.

3. Favorable Environmental Effects. The reduction of flood water damages by an estimated 88 percent, especially that caused by storm sewer backup, will greatly reduce the public health hazard caused by polluted and stagnant pools of flood water.

4. Adverse Environmental Effects Which Cannot Be Avoided. Considerable ecological damage will result in the Busse Woods area due to the change from a woodland environment to a water environment. The amount of change and the adverse effects it will have should be discussed in greater detail in the EIS.

Channelization usually leads to an increase in stream velocity which in turn increases the amount of sediment in the water. What will the effects of this sediment increase have on the fish stocked in structure 1? Storm water also contains a significant amount of pollutants in urbanized areas. An estimate of the effects that these pollutants will have on the fish population should be included in the EIS.

The 1,610,000 annual visitor days will add an additional 8,000 vehicles per hour on a Sunday afternoon as indicated in the EIS. The number of vehicles presently using the roads in the area and the 1990 ADT should be included in the EIS. If any streets or highways need to be widened as a result of the proposed recreation facilities, the effects on the communities should be discussed in the EIS.

5. Alternatives. The historical patterns of floodplain land use have resulted in ever-increasing annual flood losses, despite the investment of millions of dollars in flood control structures. We believe that management emphasis must change from hydrologic system alterations and control to modification of land use if the threat of flooding is to be reduced on a permanent basis. There are a variety of non-structural alternatives that should be thoroughly evaluated on a realistic basis before proceeding with a structural alternative alone.

Building codes and permit systems can limit the damage to the environment and human welfare. Building codes can require such things as prevention of building flotation by requiring proper anchorage; the establishment of minimum elevations consistent with flooding potential; limits on the type of materials that can be used to those which are not damaged by water and the requirement that structural design be capable of withstanding water pressure and flood flow velocities.

Flood forecasting programs can be established within the watershed in order to provide reliable information in advance of expected time arrivals for particular flood stages. These forecasts would be made on the basis of information gathered on the rainfall characteristics of various storm frequencies and the runoff characteristics within the watershed.

Governmental regulation of land development through the exercise of zoning powers can be required for floodplain lands within the watershed. In the floodway fringe builders could be required to provide fill sufficient to prevent inundation of structures and incorporate flood proofing techniques. In the floodway itself, all uses other than open space could be prohibited.

Subdivision regulations offer a useful device for controlling flood plain land use in areas not yet developed. These regulations would require that floodways and floodway fringe areas be identified on area maps submitted to the local governing agency. These maps would be used to serve as a warning to prospective land purchasers. Regulations could also be used to exclude development from undeveloped floodplain areas through construction related provisions. These regulations could require certain amounts of open space, water and sewer lines, roads and other public utilities be restricted to flood-safe locations and planned buildings be erected above the 25 year flood stage. The Final EIS should thoroughly address all alternatives - structural, non-structural and combinations of both including costs and benefits and adverse environmental effects.

6. <u>The Relationship Between Local Short-Term Uses of Man's Environment and the Maintenance and Enhancement of Long-Term Productivity</u>. The relationship of potential damage reductions in the Upper Salt Creek Watershed due to the planned channelization of Lower Salt Creek should be clarified.

All wetlands should be dedicated to public enjoyment and wildlife habitat.

7. Any Irreversible and Irretrievable Commitments of Resources Should the Proposed Project be Implemented. The discussion in this section apparently misses the point of this topic. This section is included in the EIS to highlight those permanent commitments of resources which will have to be made if the project is implemented. These resources are either permanently committed to the use envisioned in this project or are committed for the lifetime of the present area residents, regardless of whether the project was removed and every effort made to restore the area to its original aspect. The resource commitments presently described in the Environmental Statement are merely a restatement of the environmental impacts of the proposed project.

   While the utilization of land resources for sediment, beneficial use and floodwater retarding pools does represent a significant commitment during the existence of these structures, the dam fill, levee, channel lining, and landscaping materials are generally, irreversibly committed and should be mentioned in the statement. Any mature tree stands removed to install project features, should also be mentioned. Drained land and land zoned as flood preserves may also affect or be affected by the growth of adjacent communities, depending on the length of the interim use period.

8. Consultation With Appropriate Federal Agencies and Review by State and Local Agencies Developing and Enforcing Environmental Standards. The comments made by the public during the public hearings should be summarized in the Final EIS. If any additional hearings are scheduled, these should also be included.

FEDERAL POWER COMMISSION
WASHINGTON, D.C. 20426

IN REPLY REFER TO:

JAN 11 1973

Honorable Earl L. Butz
Secretary of Agriculture
Washington, D.C. 20250

Dear Mr. Secretary:

This refers to the letter of November 27, 1972, from the Administrator of the Soil Conservation Service, inviting comments by the Commission relative to the watershed work plan for the upper Salt Creek Watershed, Illinois, prepared under authority of the Watershed Protection and Flood Prevention Act (P.L. 83-566), as amended. The letter also furnished for comments a draft environmental statement.

The proposed watershed work plan is intended to reduce flood damages and create water related recreational opportunities in the upper Salt Creek Watershed. The plan would include five floodwater retarding structures, one floodwater retarding-recreation structure, 1.8 miles of channel improvement, and associated land treatment measures. The total project installation cost is estimated to be $26,515,800.

Review of the watershed work plan by the Commission staff indicates that there are no reservoirs in the plan of size suitable for hydroelectric power development. Also, there are no existing power plants, or known plans for the future development of electric power, that would be affected by the proposed upper Salt Creek development.

The staff notes that, according to your Department's report, the proposed development would require some modification or relocation of several existing utility lines. It notes also that the proposed development would not significantly affect natural gas interests.

Based on its consideration of the watershed work plan for the upper Salt Creek Watershed and on the studies of its own staff, the Commission concludes that the proposed improvements would not provide opportunity for the economical development of hydroelectric power. Also, such improvements apparently would not affect any existing or known potential bulk power facilities.

Other than the view expressed above, we have no comments on the draft environmental statement.

Sincerely,

John N. Nassikas

John N. Nassikas
Chairman

STATE OF ILLINOIS
DEPARTMENT OF CONSERVATION
SPRINGFIELD 62706

April 20, 1973

Mr. Howard W. Busch
State Conservationist
USDA Soil Conservation Service
P. O. Box 678
200 West Church Street
Champaign, Illinois 61820

Dear Mr. Busch:

The USDA Soil Conservation Service Draft Environmental Statement has been reviewed, from the standpoint of impact on present or potential National Register historical or archaeological sites, by this Department. There are no existing National Register sites within the Upper Salt Creek Watershed, nor has this Department received or prepared any National Register nominations from this area, which would be effected.

I note, with gratification, that the Illinois Archaeological Survey has been involved in your project effect determination and that the IAS will be allowed opportunity for field review on the structure area. I thank you for this opportunity of review and comment.

Sincerely,

Anthony T. Dean
Director
State Historic Preservation Officer

ATD:gjf

STATE OF ILLINOIS
EXECUTIVE OFFICE OF THE GOVERNOR
OFFICE OF PLANNING AND ANALYSIS
SPRINGFIELD 62706

FRANK A. PATALANO
DIRECTOR

February 8,1973

Mr. Kenneth E. Grant
Administrator
U.S.D.A.
Soil Conservation Service
Washington D.C. 20250

Dear Sir:

The Illinois State Clearinghouse and the Projects Task Force of the Natural Resource Development Board have reviewed the draft environmental statement for Upper Salf Creek Watershed -- Cook, Lake, and DuPage Counties, Illinois, and have no adverse comment to make thereon.

We are pleased to have the opportunity to review this report.

Sincerely,

L P Malone

Lawrence P. Malone
State Clearinghouse Coordinto

LPM:ma
cc: Busch, State Conservationist

...Madison Street ... Chicago, Illinois 60606 ... (312) 782-2050

...THEASTERN ILLINOIS
...NNING COMMISSION

MATTHEW L. ROCKWELL
Executive Director

FRED M. DUNKE
President
ROBERT F. CLSON
Vice President
WALDEMAR A. RAKOW
Secretary
FRANK W. CHESPOW
Treasurer

January 18, 1973

Mr. Howard W. Busch
State Conservationist
U. S. Department of Agriculture
Soil Conservation Service
P. O. Box 678
200 West Church Street
Champaign, Illinois 61820

NIPC No. 72-A-87

Subject: NIPC Project No. 72-A-87, U. S. Department of Agriculture-
Draft environmental impact statement for Upper Salt Creek
Watershed Work Plan, Cook, Lake and DuPage Counties.

Dear Mr. Busch:

The NIPC staff finds that the Draft Environmental Statement prepared for the Upper Salt Creek Watershed Project adequately assesses the major aspects of environmental impact which would result from the project.

The Northeastern Illinois Planning Commission previously reviewed the project under its A-95 Clearinghouse responsibility, and found it consistent with comprehensive regional planning policy. The water management benefits provided by the project promise to be a significant step toward realizing the goals and objectives of the Comprehensive General Plan and its functional plan elements.

We wish to emphasize the importance of protecting the Busse Woods Nature Preserve by means of the measures indicated on page 10 of the draft environmental statement.

The opening sentences of Item six on page 18 implies that no additional forest preserve land (or other regional open space) will be acquired beyond the ten percent of the watershed area already committed to that use. The Regional Open Space Plan, on the other hand, indicates several first priority open space acquisition areas within the watershed. No doubt the sentences mentioned above are in error, since the study report for the Upper Salt Creek Watershed clearly called for additional land to be preserved in an open state. The statements referenced should be clarified in the final environmental statement.

...rn Illinois Planning Commission was created by the Illinois General Assembly in 1957 ...

Thank you for the opportunity to review and comment on the draft statement.

Sincerely,

Matthew L. Rockwell
Executive Director

MLR/lew

cc: Ted Bryzski-Cook Co.P.D.
Jerry Estes -Lake Co. P.D.
Joe Abel -DuPage Co.P.D.

NATIONAL AUDUBON SOCIETY
1020 E. 20TH STREET, OWENSBORO, KENTUCKY 42301 (502) 685-1849

March 13, 1973

Mr. Kenneth Grant, Administrator
Soil Conservation Service
U.S. Department of Agriculture
Washington, D.C. 20001

RE: DRAFT ENVIRONMENTAL STATEMENT ON UPPER SALT CREEK WATERSHED PROJECT, USDA-SCS-ES-WS (ADM) - 73-26-(D)

Dear Mr. Grant:

We are pleased to comment on the draft environmental statement on the Upper Salt Creek Watershed project in Cook, Lake and DuPage counties, Illinois. As is our usual practice, we have referred this statement to our nearest local chapter, which in this case was the Chicago Audubon Society. The statement was reviewed and a detailed study was conducted by the chapter's conservation committee under the leadership of its chairman, Mrs. Marjorie Molyneaux, and committee member, Dr. Peter Ames. The National Audubon Society concurs with the findings of our local chapter.

The proposed land treatment program of the Upper Salt Creek Watershed is a stop gap solution imposed on the Soil Conservation Service by the lack of a regional development plan that could have controlled housing development in the area. By designating essential areas for housing, recreation, natural habitats for flora and fauna of the area, drainage, waterways, etc., the widespread damage to housing resulting from natural periodic flooding of the area might have been prevented.

This does not mean that the Soil Conservation Service plan cannot be improved or that the execution of it may not fail to live up to the promise. We are only evaluating the plan as submitted. We are, however, recommending the formation of a Regional Planning Board with power to study those farm lands between the Salt Creek Watershed and the cities to the west, as well as areas around every metropolitan center where the pressure of increasing population is destroying the habitats of the flora and fauna natural to the area, and permitting the erection of housing on lands that should remain uninhabited. The Board should then make recommendations to the State Legislature for action.

1. Considered as a whole, the project seems to be well worthwhile, in view of the extensive flooding and property damage that occur regularly within the watershed. The present situation is the result of a long-term lack of regional planning, for which the communities of the watershed must now pay the price. Many of the areas within the watershed where development has taken place never should have been developed, but should have been left as wetlands. At this point, however, faced with a fait accompli, one has no choice but to attempt some measure of flood control. The measures proposed by the Soil Conservation Service will cause the minimum of environmental damage consistent with the large degree of development within the watershed.

It would be highly desirable, however, for further development to be curtailed in those regions where flooding is likely. The inclusion of certain areas of "low intensity-low hazard" public use in the Soil Conservation Service proposal apparently reflects the recognition by the Soil Conservation Service that flood control is not absolute.

2. From the draft and the map we note that there is planned 1.8 miles of channel modification which will require 26 miles for right of way. No drawing of the proposed channel has been included. Will the present channel remain, or is redirection planned? If so, where? The reference states that there will be "reshaping and excavatin". It also mentions making the channel "more esthetically appealing" - but does not define those terms. In whose opinion is it more esthetically appealing?

3. Extensive mention is made of vegetation replacement, ranging from grasses to trees. We would like to see the statement stipulate that only plant species native to Illinois will be used. This is particularly important near the Forest Preserve District areas. In addition, methods must be outlined by the Department of Agriculture as to how they intend to protect present vegetative cover. The revegetating is not necessary if methods are made to protect existing vegetative cover. In addition, the environmental impact of the project will be less severe if this is done.

4. Mention is made on page 6 of the lack of recreational facilities within the watershed. This is then applied to the population demand of the 6,000,000 people living within a 25 mile radius. Such a comparison is specious and misleading, since no mention is made of Lake Michigan, 10 miles to the east. If the report is going to justify the creation of a recreational facility on the basis of use, then it should use the population figure based on the use area. Such figures are readily available and must have been used to compute the number of visitor days of use for the proposed facilities. If the 6,000,000 is to be used, the statement should also indicate the extent of water-based recreational facilities within the 25 mile radius.

We appreciate this opportunity to comment on the draft statement for this project.

Sincerely,

John Franson

John L. Franson
Central Midwest Representative

Council on Environmental Quality

cc: U.S. Department of Interior
Environmental Protection Agency
Governor Dan Walker, Illinois
Illinois Department of Natural Resources
National Audubon Society
Chicago Audubon Society

FYI Messrs. Dalton and Lanyon. FCN/ar

o: Office of Federal Activities, EPA Region V
rom: George J. Benda
ubject: Comment on Soil Conservation Service Draft EIS for
he Upper Salt Creek Watershed Project
ate: 1, January, 1973

This EIS appears to be a fairly honest and straightforward representation of the problems and solutions encompased in this project with the following exceptions:

page 6, paragraph 2
"Tests made by the Sanitary Water Board...indicate that the fecal coliform 10-year average readings slightly exceed the established standards for recreation."
First, the Sanitary Water Board no longer exists. Therefore, the Board cannot make tests that indicate anything. The SWB has been replaced by the Illinois Environmental Protection Agency. The IEPA has data collected and tabulated for 1964-1970 presently on record. Second, what is the 10-year average for fecal coliform and by what standards has the average been evaluated? The 1964-1970 TOTAL coliform counts by IEPA are as follows:

Maximum: 300,000
Minimum: 4,000
Average: 59,437

These seem to be very high counts for recreational waters.
This short paragraph on water quality ignores several other parameters necessary to evaluate the possible impacts of the Project. Especially notable in the absent parameters are the BOD, COD--DO average ratios and amounts, the nitrogen-phosphorus(total) ratios and amounts, and the present levels of turbidity. These are all critical factors in evaluating the chances of eutrophication of the impounded waters.
Finally, in this paragraph the Metropolitan Sanitary District project for the Upper Salt Creek Basin is mentioned. This project should be described in greater detail, especially how this project will affect the flow of Salt Creek above the Elk Grove STP site.

page 8, paragraph 4
(Though this is not a direct criticism of the EIS, I feel that it should be included in the comments.)
The use of recreational developments to "balance" benefit: cost ratios in flood control projects is common practice. However, this practice should be questioned.

page 12, paragraph 3 and
page 15, Section 3, (5) & (7)
I chose to treat these citations together as they are closely related. It is stated (pages 12&15) that an additional ,610,000 annual visitor days of water based recreation will e provided by t e impoundment associated with structure 1. t is also stated (p.15) that "the project will create 649 cres of water surface suitable for lake fishery and water-

fowl resting and feeding area." These statements appear to disregard the great possibility that the lake will eutrophy. If a more careful analysis is made of water quality data available (as suggested in one of the first comments), trends can be seen which indicate that chances of eutrophication of an impoundment such as proposed are considerable. My belief in the probable eutrophication of the lake is shared by Dr. Etter, a naturalist at the Morton Arboretum, and others, includir a Cook County Forest Preserve District Administrator who believes "it'll turn into a slough in a couple of years and be no good to anyone."

page 21 paragraph 3

"Reaction at these [public] meetings was in support of the plan as formulated."

I feel that this statement is an inaccurate representation of public opinion and that it should either be furtner qualifi or deleated. The last public meeting, as stated in this paragraph, was on 5, November, 1970, over two years ago. The project has changed since that time and it can be assumed that public opinion has also changed. Therefore, I suggest that one or several public meetings be held BASIN WIDE to establish a measure of present public opinion. Points of view other than those of the SCS should also be presented at these meeting

page 21, paragraph 4

Why has the Illinois Nature Preserves Commission been deleated from this list? They have at stake a large portion of a nature preserve towards which much of the EIS was directed. Why have they not been asked to comment on the EIS?

In conclusion, I feel that the EIS should not be approved until the possibilities and probabilities of the eutrophication of the impoundment behind structure 1 are studied in detail. Furthermore, I feel that there should be a public meeting to establish present public opinion of the project in the population of the entire basin. Finally, the Illinois Nature Preserves Commission should be more directly included in the evaluation processes of the project.

G. Benda
530 S. 7th Ave
La Grange, Ill.
60525

Mr. Kenneth Grant, Administrator
Soil Conservation Service
Washington, D.C. 20250

1-22-73

Dear Mr. Grant,

In reviewing the Draft Environmental Impact Statement for the Upper Salt Creek Watershed (Cook, Lake, and DuPage Counties, Illinois), I have three major objections. The statement is factually inaccurate, misleading, and incomplete. It fails to dismiss the possibility of the lake eutrophying. In fact, it never mentions the possibility of algae growth in the proposed Busse Woods Reservoir.

On page 6 of the statement one is led to believe that the Sanitary Water Board still exists. The Sanitary Water Board was replaced by the Environmental Protection Agency two years ago. In the same paragraph, the complex issue of assessing pollution levels is reduced to only one parameter, fecal coliform. The final statement should evaluate other parameters to a more current date, particularly, Biological oxygen demand, oxygen, phosphate and nitrogen levels. This information should be given in table form [illegible]

and other standards for recreation. The statement in the draft is inexcusably ambiguous, for "slightly"

can mean anything and we are never told wha
standards are being used for recreation. The
of specific pollution levels is vitally needed be
Illinois has different water quality standar
for lakes than for streams. I believe the
phate level was not given because the SC
knows Salt Creek can not possibly meet the
.05 mg/l level required for streams entering a
reservoir. Since Salt Creek can not meet the
the costs of the project should be vastly hig
By not pointing out this important fact the SCS
misleads one into thinking Salt Creek is only
"slightly" polluted; whereas it is really gross
polluted.

Another important omission is the absence of any
attempt to relate stream water quality with eutrophi
tion. Some sort of study should be done to
determine whether or not the Busse Woods reservoir
will become clogged with algae. I know from
personal observations of the Fullersburg dam and
at Salt Creek, that Salt Creek can eutrophy
I believe a similar fate will await the Busse Woods
reservoir. The only solution is an air
[illegible] must be disposed
before construction begins. Until the SCS
proves the Busse Woods lake will not eutrophy

I do not believe the impact statement to be complete. The question of eutrophication must be addressed because it directly relates to the "favorable" environmental impact on page 15 which says "an estimated 1,610,000 visitor days of water-based recreation will be provided at structure 1." Few people will recreate in a lake which is an eg. algae pond.

My final complaint relates to the dismissal of alternative plans, in particular the alternative of buying flood plains. Public ownership of the flood plains is the only permanent solution to the flooding problem. Public ownership would preserve the natural characteristics of the creek while providing park land. (Note that the present plan consumes land by submerging it.) Despite the advantages of flood plain management, in the impact statement it is dismissed for no apparent reason. On page 17 a brief mention is made of flood plain management, but no quantitative reason is given for not using it. The statement must give a monetary cost of buying flood plains and purchasing structures in the flood plain. Until [illegible] the plan and the alternate can not be compared.

I hope my comments will cause a major revis
of the impact statement. Such a revision w
take at least a year, because an eutrophication
study cannot be produced overnight. At a
rate, I request that my comments be includ
in the final statement and that they be cir
and not disposed of.

I would like to add that I object to th
project on a ground level. In an area whe
nature is being consumed (see page 2 of statement)
all efforts should be made to keep nature natu
and increase the amounts of park land. The
present proposal could destroy a park by brin
too many people to the park. I do not see an
increase in the number of visitor days as an
advantage, but as an absolute detriment. This
project does no good to the environment, for it
merely continues the trend of destroying or
altering nature.

With love for nature,
Neal Bratcher

U. S. DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE

PROJECT MAP
UPPER SALT CREEK WATERSHED
COOK, DU PAGE AND LAKE COUNTIES, ILLINOIS

APPENDIX F

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